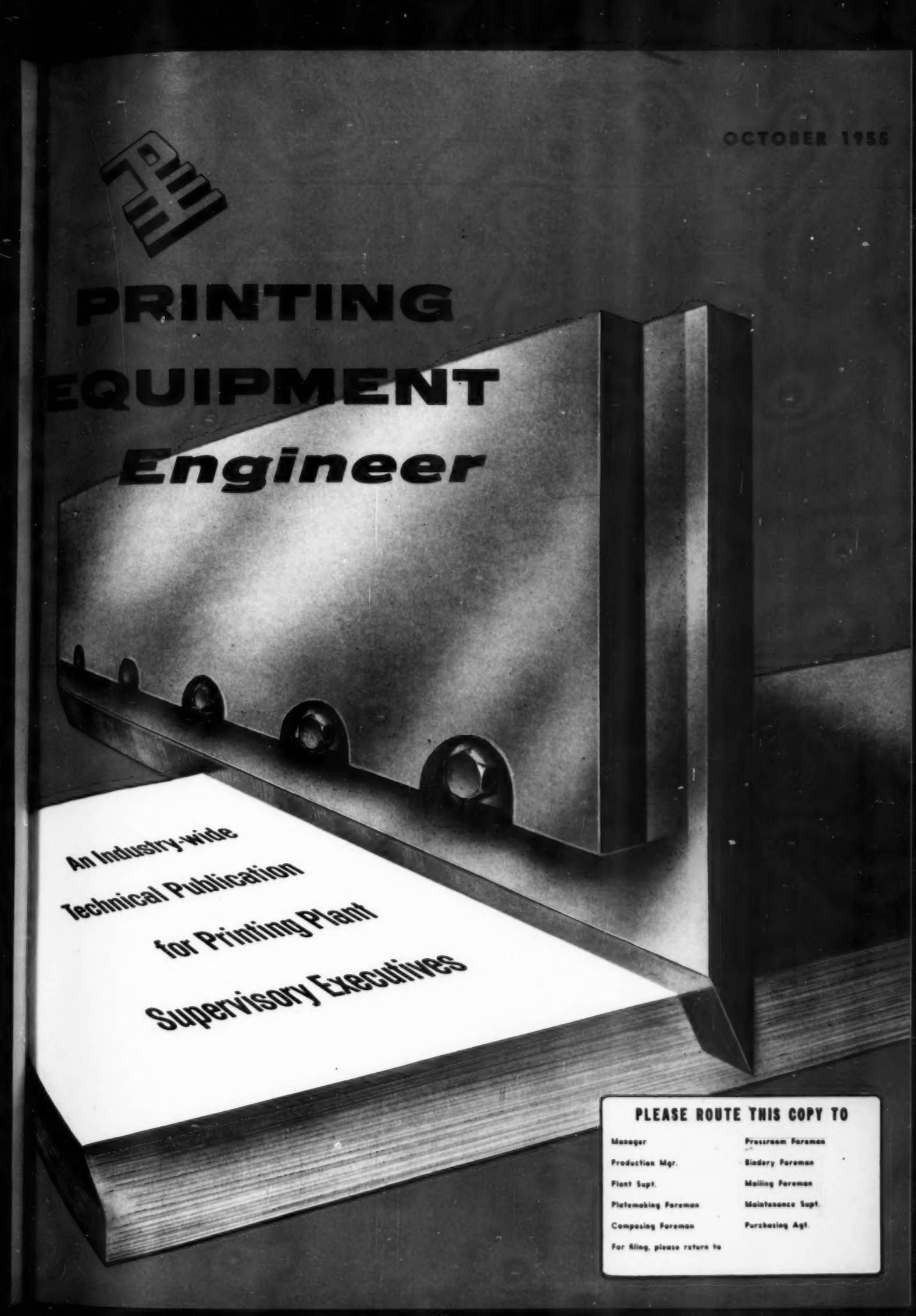
OCTOBER 1955

PRINTING EQUIPMENT Engineer



An Industry-wide Technical Publication for Printing Plant Supervisory Executives

PLEASE ROUTE THIS COPY TO

Manager	Pressroom Foreman
Production Mgr.	Bindery Foreman
Plant Supt.	Mailing Foreman
Platemaking Foreman	Maintenance Supt.
Composing Foreman	Purchasing Agt.

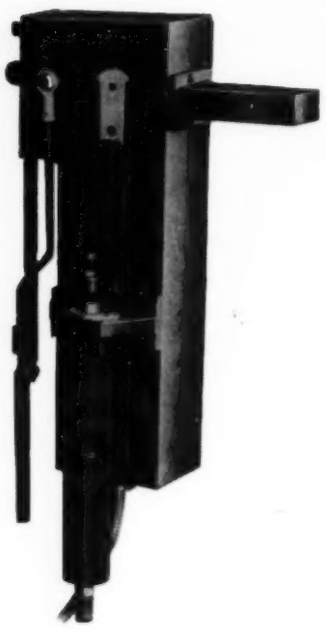
For filing, please return to

A FEW FACTS

about how the
Star Selecto-Matic Quadder
can help cut costs in your composing room!

Rising costs in the Graphic Arts have forced printing plant owners and publishers to seek new methods of increasing efficiency. In the composing room, there exists a great opportunity to cut costs and improve present equipment without wasting capital funds for additional new major equipment. A job or ad slug-casting machine doing some specialty work which requires quadding may be performing this task without an automatic quadder. It is a fact that slug casting machines doing this work can improve production from 20 to 60% depending upon the type of work involved. Can you, as a commercial printer or a newspaper publisher, afford to overlook this opportunity?

A Star Selecto-Matic Quadder on your slug casting machine can mean the difference between profit and loss or between getting the job or not getting it. In the newspaper field it can mean the ability to accept late ads that otherwise could not be handled. Heads, TV listings, and classified ads are set faster and with less operator effort. It will pay you to investigate the Star Selecto-Matic Quadder . . . start now by writing for our new detailed brochure.



7 REASONS WHY THE STAR QUADDER LEADS THE FIELD!

Memory circuit provides continuous operation • Push-button selector controls • Simple, proven Hydraulic Actuation • Short line device quads "widow" line automatically • Operates from Teletypesetter tape signals when required • 8 hour installation • Interchangeable between all 30 pica Linotype and Intertype machines. When either one is replaced by the other the STAR Quadder may be transferred, saving the original investment.

2910

Precision TRADE ★ MARK Parts

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AGENCIES CHICAGO • MINNEAPOLIS •
LOS ANGELES • DENVER • BOSTON
CANADA SEARS LTD. and Agents Overseas

LINOTYPE PARTS
Company, inc.
SOUTH HACKENSACK, N. J.

composing room time, space and money saver!

With a Sta-Hi Form File you can store 16 full page newspaper forms, or the equivalent, in a "Vertical Filing System" occupying only seven square feet of floor space—slightly more than the area required for one makeup truck.

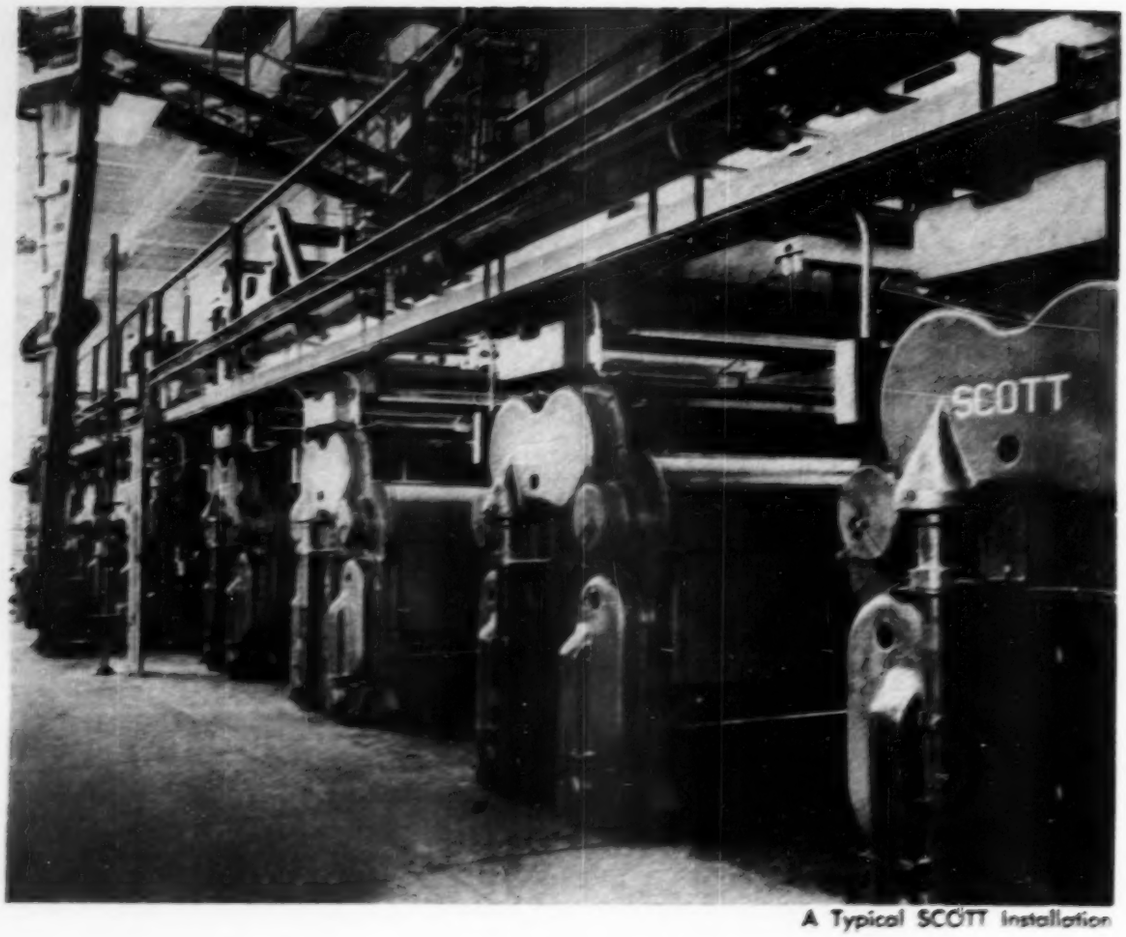
All forms are transferred to or from the Form File at *convenient truck-high level*—no stooping, straining or reaching is necessary for access to any filing tray. There is no time consuming intermediate transfer medium—forms slide directly to or from the truck, in or out of the filing trays.

Hundreds of satisfied Form File owners, some of whom have been using this equipment for more than 16 years, praise its economical, efficient operation . . . If you will write us, we'll tell you where you can see a Form File installation in your vicinity.

STA-HI

. . . your best buy

STA-HI CORPORATION • WHITTIER • CALIFORNIA



A Typical SCOTT Installation

Why SCOTT *newspaper equipment sets the* Standards of Performance

THE world-famous performance of Scott Newspaper Equipment originates at the design boards, and continues through every stage of manufacture. The resulting over-all superiority of Scott units comes from constant, painstaking attention to every detail involved in these four, broad considerations of design and manufacture:

1. Capability of operation at high speed
2. Maximum flexibility of use
3. Simplicity of equipment design, for economical operation and maintenance
4. Components far sturdier than required, for continuous, unfailing service.

Examine any unit of Scott equipment for its many features of advance design and construction. The fully counter-balanced cylinders, over-sized journals, mounted in large roller bearings close to the body of these cylinders, provide maximum rigidity —plus a specially designed lubricating system, insuring smooth, trouble-free extra-high speed press operation; the over-all symmetry of design and dynamic balancing of rapidly rotating parts. Watch its smooth, effortless operation, at highest speeds — and you will have just a few of the reasons why "SCOTT" stands for Leadership in newspaper equipment.

S-54-2A

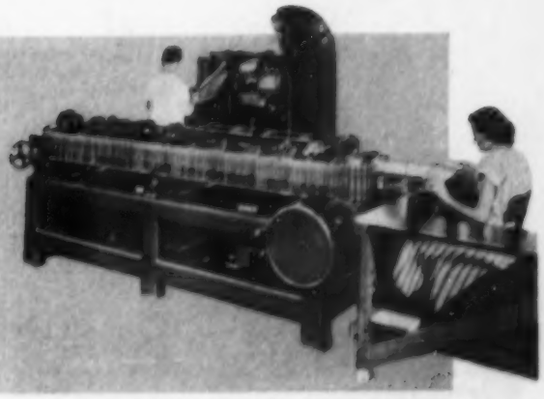
Write today for the booklet describing the outstanding advantages of SCOTT printing units.

Buy with CONFIDENCE - - - Buy SCOTT

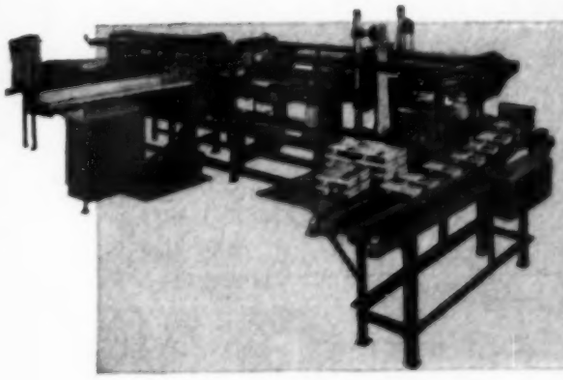
WALTER SCOTT & CO., INC.
PLAINFIELD, NEW JERSEY

Dexter-de Florez Machines and Service

Dexter-de Florez Building-in Machine



• Builds-in hard cased books at speeds up to 2000 per hour. • Any thickness, including case, from 5/16 to 2-13/16", and any width 4 to 8" and any desired length. • Delivers finished books in steady stream about ten seconds after they are fed into compression belts. • Does away with stacking and unstacking, also investment in and maintenance of boards.



Dexter-de Florez Jacketing Machine

• Jackets books 4¼ x 6" to 6 x 10", ⅛ to 2" thickness, accurately and uniformly — 3500 to 4000 per hour. • Books are fed from hopper and jackets by Cleveland automatic continuous reloading feeder. • Covers are wrapped to any desired tightness. • Economical for short runs as well as long. • Cuts jacketing costs to 50%.

Dexter–de Florez Engineering Service

Automation is making money in many industries by reducing operating costs and de Florez engineers are the automation experts in the Graphic Arts industry. Automatic operation, achieved by new design or the more efficient and economical use of present machinery, is the practical way to combat rising costs in the bindery. The engineers of the de Florez Company are experienced bindery equipment men, and can recommend cost-saving procedures or machinery, that will best solve your production problems.

ILLUSTRATED CIRCULARS ARE AVAILABLE FOR ANY OF THE ABOVE MACHINES

DEXTER FOLDER COMPANY

General Sales Office

330 West 42nd Street New York 36, N. Y.

Early in the 19th century, George Clymer invented the first iron press made in America. Levers replaced screws for raising and lowering the platen and thus was taken the first step toward the earliest "high-speed" press.
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and
NOW

WOOD METROPOLITAN PRESS.
BLACK, COLOR ADAPTABLE UNITS ENGINEERED TO MEET
EXISTING PRODUCTION REQUIREMENTS WITH PROVISION FOR FUTURE EXPANSION.

Metropolitan newspapers can avail themselves of WOOD color-adaptable units in any number required to meet production schedules.

Standard equipment in many leading newspaper plants, these fine presses include exclusive features that make them outstanding from a viewpoint of dependability and economy of operation.

WOOD NEWSPAPER MACHINERY CORPORATION
PLAINFIELD, NEW JERSEY
EXECUTIVE AND SALES OFFICE: 501 FIFTH AVENUE, NEW YORK 17, N. Y.

October 1955

An industry-wide technical magazine published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in the commercial, magazine, private plant and daily newspaper fields.

PRINTING EQUIPMENT Engineer

Volume 86 **Number 1**

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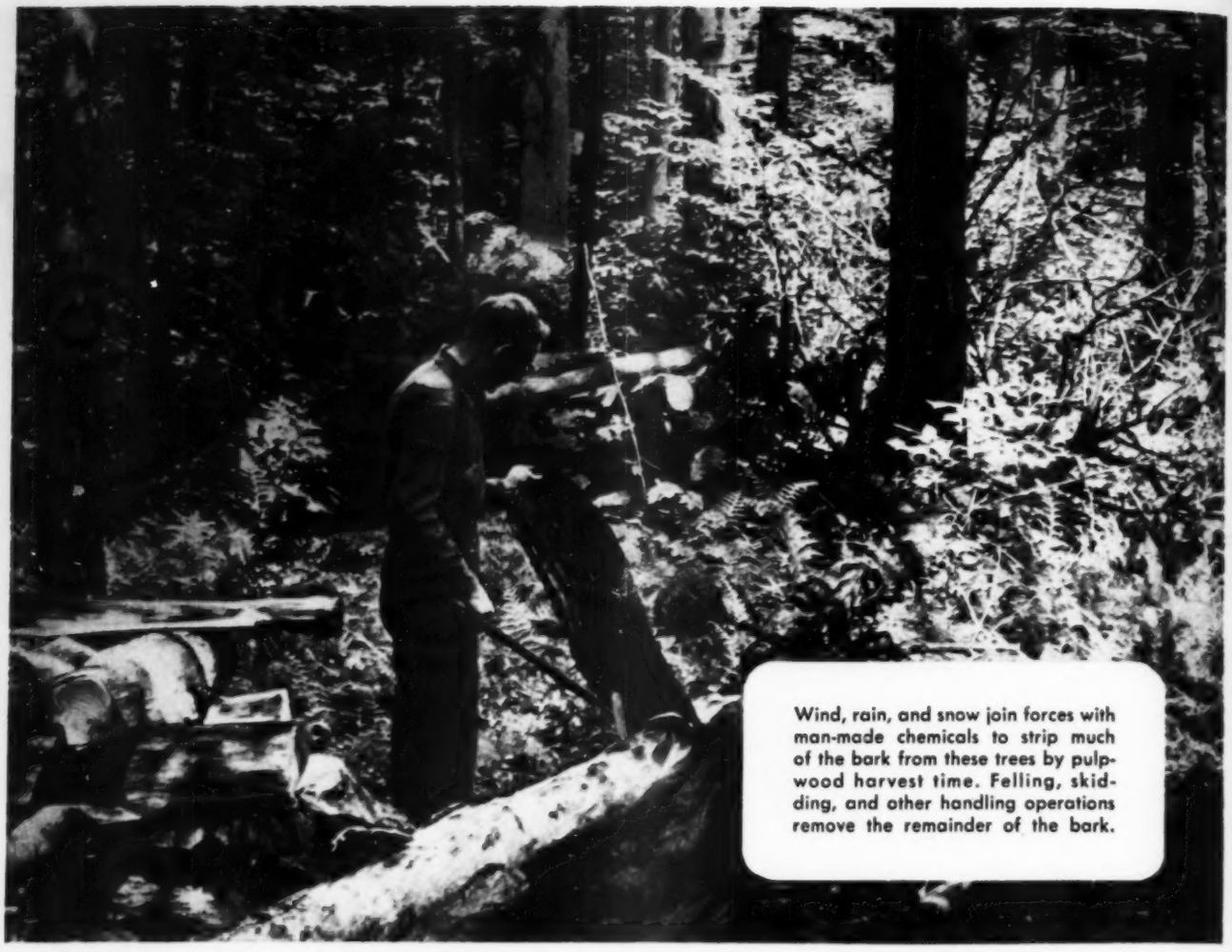
AN INDUSTRY-WIDE TECHNICAL MAGAZINE



Wind, rain, and snow join forces with man-made chemicals to strip much of the bark from these trees by pulpwood harvest time. Felling, skidding, and other handling operations remove the remainder of the bark.

POINT OF "DEBARKATION"

Debarking timber like this used to take time. Nowadays pulpwood is off to the paper mill almost as soon as it hits the ground. Thanks to the chemical girdling process, it's been debarked with a paint brush!

In spring or early summer, a narrow section of bark is peeled around the trunk of every tree scheduled for cutting, and a toxic agent is then painted on this exposed live tissue. That's all there is to it. The farmer can devote his time to other chores, while nature and chemistry go to work. By harvest time almost all the bark has been separated from the tree.

New York and Penn produces 80% of its own pulp—and through this ingenious chemical girdling process there's a supply of peeled pulpwood available all year 'round. It's just one of many cost-cutting techniques in New York and Penn's scientific management at all production levels from seedling to finished paper.

Similar quality and cost controls, applied at every stage, result in better papers and better values for you—and have made New York and Penn one of the world's chief suppliers of quality book papers.

Whether you're a publisher, printer, paper merchant... whether your needs are great or small... if you have a special paper or cost problem, it will pay you to get the full New York and Penn story today. Ask your merchant. Or phone MUrray Hill 6-6090. New York & Pennsylvania Co., 230 Park Ave., New York 17, New York.

New York and Penn

Pulp and Paper Manufacturers

Super • English Finish • Eggshell • English Finish Litho • Offset • Music • Bond • Tablet • Duplicator • Mimeograph • Drawing • Imitation Press Board • and other specialty grades

Simplicity is the keynote of the Ludlow system. The Ludlow machine is simple in design without complicated or fast-moving parts to get out of order. The Ludlow system of matrix gathering, spacing and slug-casting is also simple. This simplicity makes possible quick, accurate production of composition at low cost.

Ludlow Typograph Company 2032 Clybourn Ave., Chicago 14

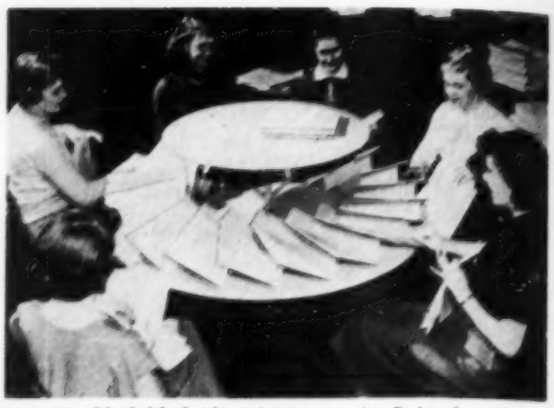
Equipment and Supplies

If you wish additional information concerning equipment, supplies and/or technical literature, please make your request to **PRINTING EQUIPMENT** *Engineer, 1276 West Third St., Cleveland 13, O.*

Engravers' Gauge

Alico, Incorporated has announced an Engravers Depth Loupe for checking and measuring the depth of halftone engravings. The instrument is designed to make a rapid measurement of the depth achieved in a highlight area during the etching process by casting a light ray against the side of the dots and noting the length of the shadows cast. A built-in light source illuminates the area being checked. For example, for a 65-line screen and a highlight dot of 0.002 in. diam., an etch of 0.006 in. has been reached when the apex of the shadow area cast by a dot in the center of the lens field reaches an imaginary line drawn through the center of the next line of dots. Dots less than 0.006 in. high will produce a shadow that does not reach the imaginary line; dots greater than 0.006 in. high will do just the opposite. For further details, please mention PEE No. 578 in your request.

Rotary Collator—The CADM Corporation has announced a Rotary Collator. The collator was constructed for collating magazines, bulletins, etc. Six operators may work simultaneously at sitting or standing position. A storage deck is provided for extra supplies or collated sections. The Rotary Collator is equipped with an inner pressure switch control ring which enables any of the operators to start or stop the machine by toe pressure. Capacity is 40 page or 20 folded signatures up to 9 in. by 12 in., with special sizes up to 12 in. by 19 in. All steel construction and variable speed control are other features. For further details, please mention PEE No. 573 in your request.

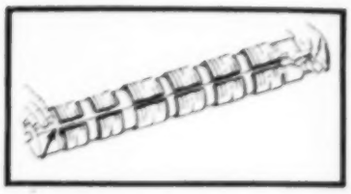


Gummed Printing Papers

The Gummed Products Co. announced all its Trojan gummed printing papers will be processed by a new method designed to make the papers lie flat over a wide range of relative humidity. The new process is called Trojan 3D and also improves the handling characteristics of the paper, according to the sponsor. For further information, please mention PEE No. 577 in your request.

Rubber Plate Bases

To provide a method of mounting and re-registering individual rubber plates on printing press cylinders, PD-A2 Snap-On Bases have been developed by Porter & Dugas, Inc. Forming a registered printing plate,



the bases are actually sleeves that can be slipped on and off the cylinder. Bases can be filled with plates

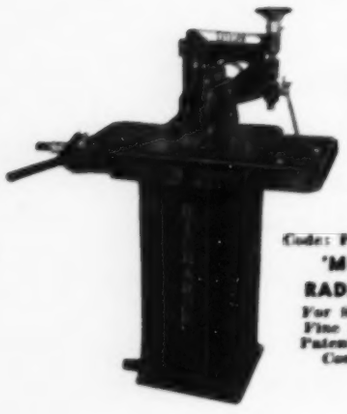
(Continued on Page 18)

SPEED PRODUCTION with
RICHARDS' PRECISION
SAWS • ROUTERS • MORTISERS

For further information on these and other **RICHARDS EQUIPMENT, Saws — Routers — Mortisers,** *please write*

NEW MODEL
Code: M2-B
ENCLOSED CURVED PLATE ROUTER
with new close coupled single belt drive
Ball bearing construction throughout
Price $1875.00 complete

'ELECTROMATIC' SAW TRIMMER
For Stereotypers, Electrotypers, Photoengravers
Code: E8T-27x36 Table
E8bT-33x42 Table



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'MULTIFORM' RADIAL ROUTER
For Straightline and Fine Detail Routing
Patented Straightline Control Feature

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Lake Erie

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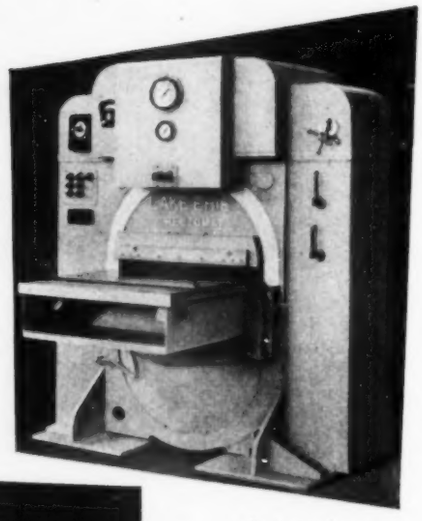
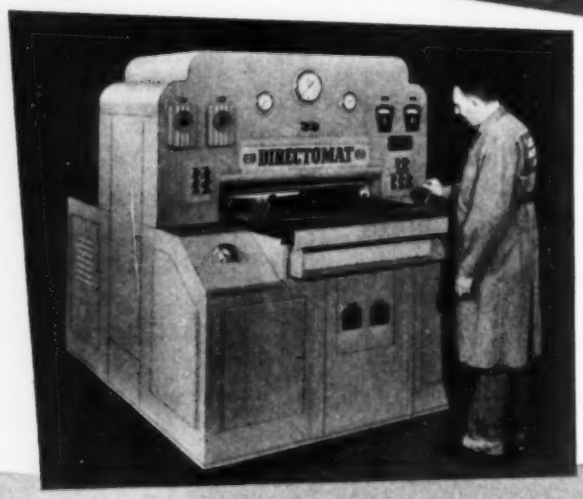
for direct pressure stereotype mat molding... for commercial, syndicate, daily newspaper and R.O.P. color work.





(above)

800 TON DIRECTOMAT

Recent installations include Philadelphia Bulletin, King Features Syndicate, New York, Roto-Color, Inc. (Pioneer Publishing Company), St. Charles, Illinois, Photo Engravers and Electrotypers, Ltd., Toronto. More than 260 Directomats already serve leading newspapers and commercial plants.

(left)

1000 TON HEAVY DUTY DIRECTOMAT

used by Rapid Grip & Batten Ltd., Toronto, The Milwaukee Journal (2), Chicago Tribune, Denver Post, Detroit News (on order).

The people who use it prove it:

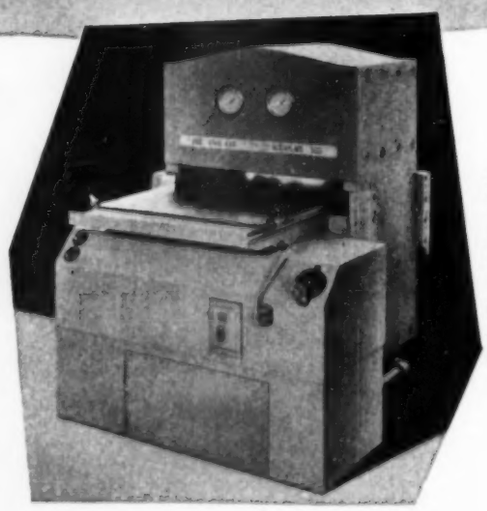
Lake Erie is the best equipment for

DUPLICATE LETTERPRESS PLATE MOLDING

Lake Erie

ACRAPLATE

for rubber and plastic plate molding... five models from 115 to 550 tons with platen sizes from 17"x22" to 36"x44".



270 TON ACRAPLATE

Three companies each have more than 20 ACRAPLATES in service. Five more have from 10 to 20 apiece. Over eighty companies have two or more ACRAPLATES. In all, over 650 ACRAPLATES have been sold.

LAKE ERIE
ENGINEERING CORP.
BUFFALO, N.Y. U.S.A.

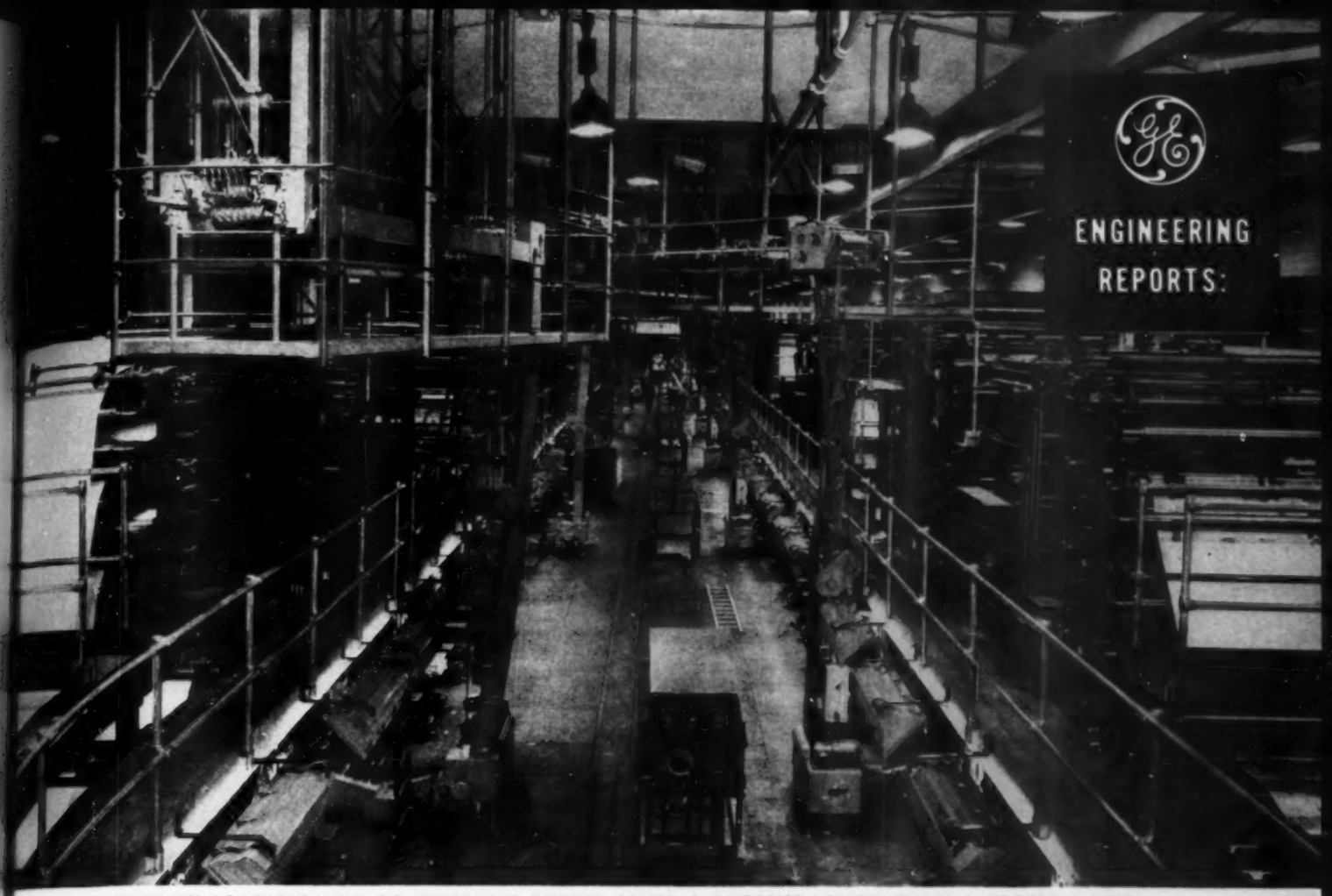
WRITE FOR *DIRECTOMAT Bulletin 349... ACRAPLATE Bulletin 350*

LAKE ERIE ENGINEERING CORPORATION

568 Woodward Avenue, Buffalo 17, New York

Manufacturers of the Most Complete Line of Hydraulic Presses for All Industry

LAKE ERIE® DIRECTOMAT® ACRAPLATE®



"WORLD'S LONGEST" LINES OF NEWSPAPER PRESSES COVER A DISTANCE LONGER THAN A FOOTBALL FIELD

For lower maintenance and installation costs, speedier production . . .

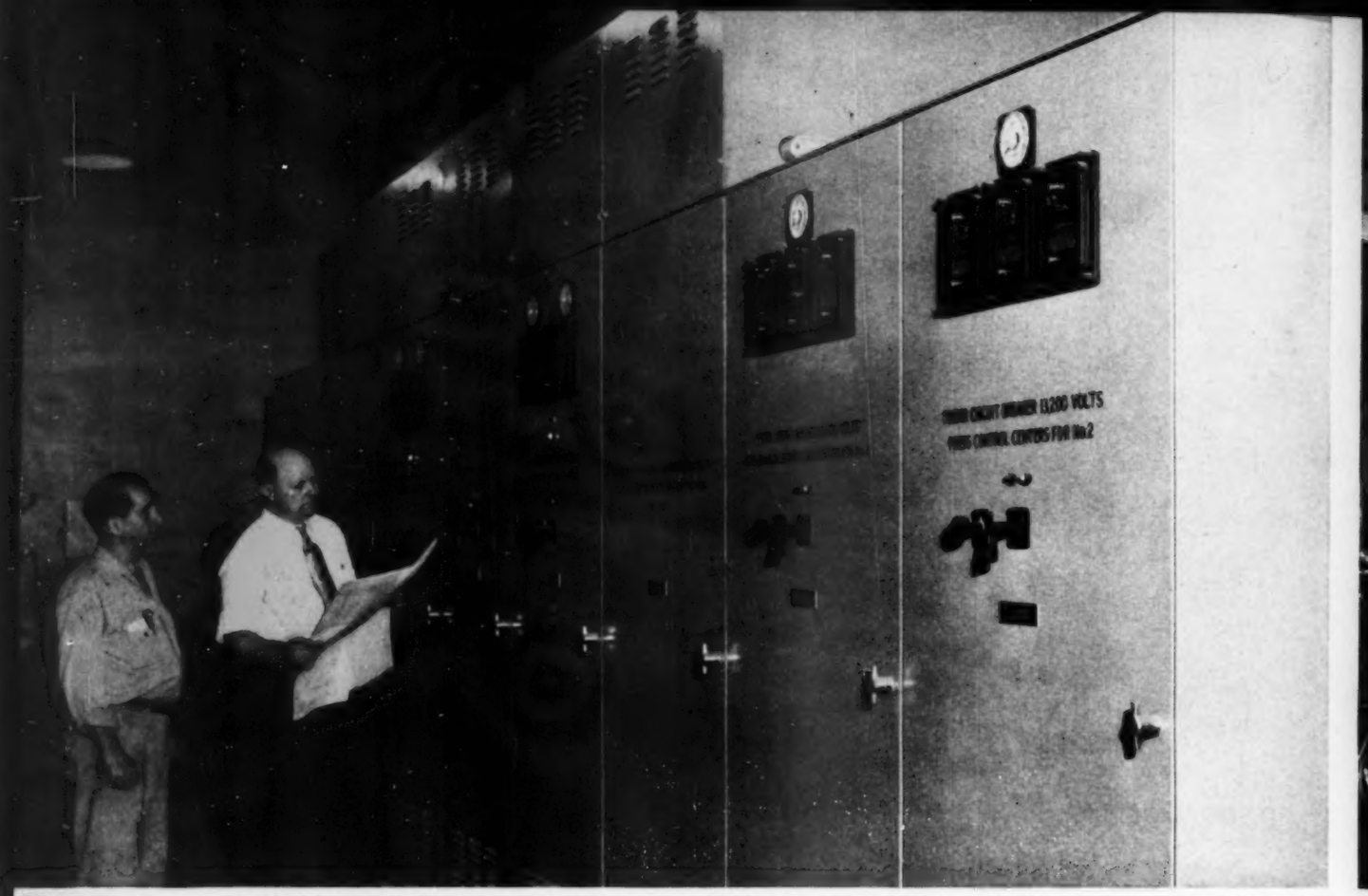
Philadelphia Bulletin installs G-E Press Drive in giant new pressroom

MASSIVE NEW PLANT IS MODERN IN EVERY RESPECT

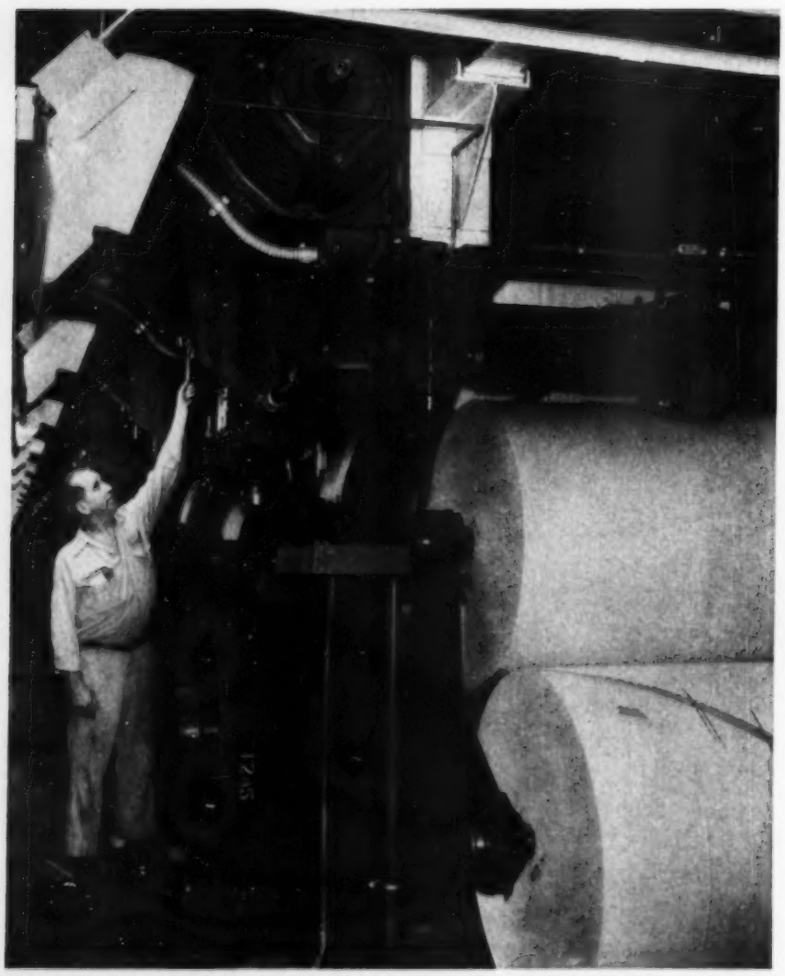
"America's largest evening newspaper and seventh largest standard size Sunday newspaper"—the *Philadelphia Bulletin*—is now printed in what is probably the largest and most modern pressroom in the world. It is 326 feet long, 154 feet wide, and 43 feet high. To drive its two lines of Hoe Color-Convertible Presses, which include 72 press units and 14 folders, the *Bulletin* chose General Electric d-c electronic press drive. This Engineering Report shows how modern, system-engineered G-E equipment from the incoming power line to the utilization load helps the *Bulletin* meet demands for increased, speedier production with efficient, flexible control of their giant presses and auxiliary services.

TURN PAGE FOR MORE ▶

GENERAL ELECTRIC



MAXIMUM CONTINUITY, PROTECTION are assured *Bulletin* by 13.8-kv G-E metal-clad switchgear. Compact, factory-assembled units made installation simple, easy, and saved space. Future feeder units may be readily added.



86 INDIVIDUAL D-C DRIVE MOTORS totalling 3440 hp are coaxially mounted, one motor on each unit. If up to one third of the motors on any press break down, the remaining motors can carry whole press load at almost normal speed.

At the Philadelphia

Simplicity and help print more

SIMPLE AC-DC CONVERSION is obtained with G-E ignitron tube rectifiers. Tubes have an expected average life of more than 8 years.

CONVENIENTLY LOCATED CLOSE TO THE LOAD, G-E 2000-kva combined power and control cubicles supply d-c power to press units and folders. Equipment is metal-enclosed, accessible from front or back. Matching units can easily be added.

Bulletin's new plant . . .

flexibility of d-c electronic equipment than 210,000 96-page papers per hour

COMPLETELY CO-ORDINATED press-drive system includes G-E Tri-Clad* motors and oiltight, heavy-duty push-button stations for reel stands and pasters.

* Registered trade-mark of the General Electric Co.

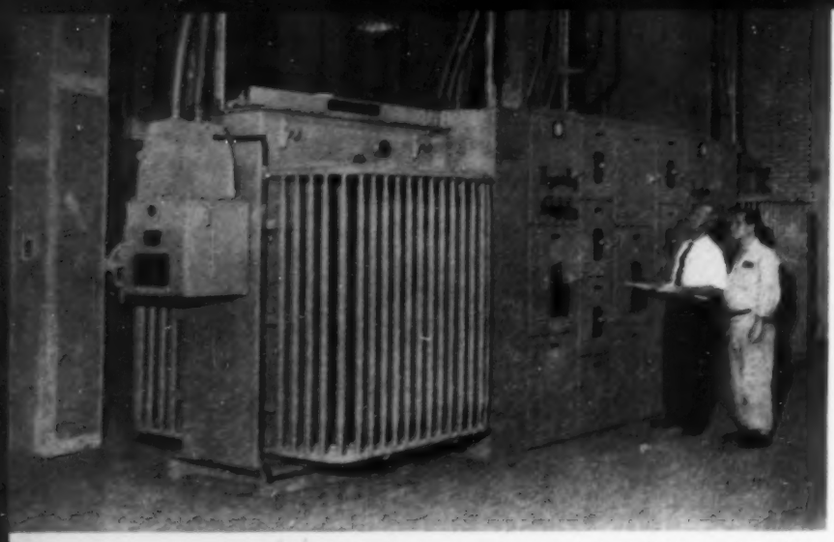
The *Philadelphia Bulletin* is all set for today and tomorrow. Its new plant, with space and equipment for all its needs in the foreseeable future, can expand its electrical system at any time with ease and economy. A General Electric engineering team, working closely with the *Bulletin's* engineers, applied a knowledge of printing and electrical engineering that contributed substantially to the operating efficiency of the pressroom and auxiliary services.

G-E d-c electronic press drive was selected for many reasons. Besides providing continuity of production, it has greater flexibility, smoother acceleration and braking, and simplified control. Installation costs are low, there are savings on power bills and maintenance, and reel room space is conserved.

Basically, the drive employs electronic rectifiers which convert a-c to d-c power. It is the first fully adjustable-voltage system developed specially for the printing industry. It requires no special training to operate and has operational advantages not equalled by other drive systems.

TURN PAGE FOR MORE ▶

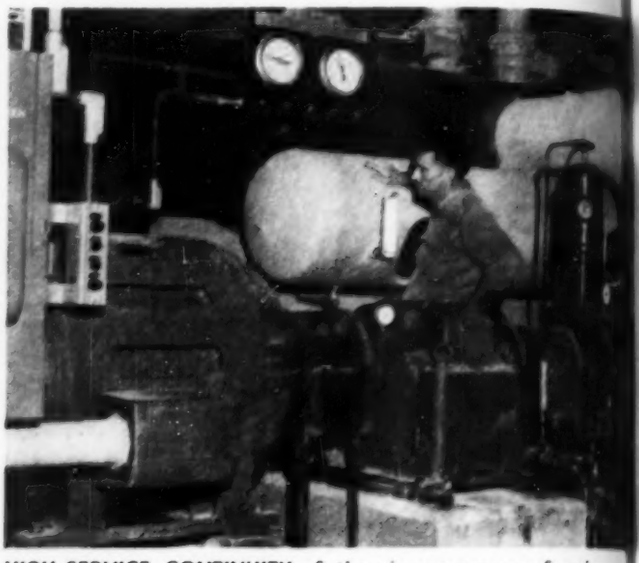
GENERAL ELECTRIC



PRE-ENGINEERED for easy, low-cost installation, G-E 2000-kva 13.8-kv/480-v load-center unit substation is one of two supplying more dependable power for the building's services.

CENTRALIZATION of control for auxiliary press motors and lighting, provided by this compact G-E 3000-kva 460/220-v motor control center, saves steps, conserves manpower.

MORE RELIABLE PROTECTION is provided for distribution units by G-E air circuit breakers (left) and G-E type D transformer. Latter steps down 480-v power for composing room.



HIGH SERVICE CONTINUITY of the air compressors for air-conditioning the new plant is assured by G-E 500-hp induction motors and gears which require minimum maintenance.

The Philadelphia Bulletin, too, finds that . .

G-E d-c electronic press drive is simple, low-cost way to print the news

IT RAISES PRESSROOM EFFICIENCY. For "production insurance," if individual drive motors are lost from a press combination, those remaining can carry the whole load at almost normal speed. For greater flexibility, one motor on each press unit handles all power needs—threading, inching, running and braking. Stepless speed control is provided for smoother operation. For simplified control, power and control circuits are easily matched to any press combination.

IT CUTS PRODUCTION COSTS. Factory-assembled control panels reduce installation time and costs. Inherently high efficiency and power factor of electronic drive cuts power bills. Elimination of most moving parts saves on maintenance. And press-mounting of d-c drive motors saves reel room space. For more information, contact your local G-E Apparatus Sales Representative or write for Bulletin GEA-5523 to General Electric Company, Schenectady 5, New York.

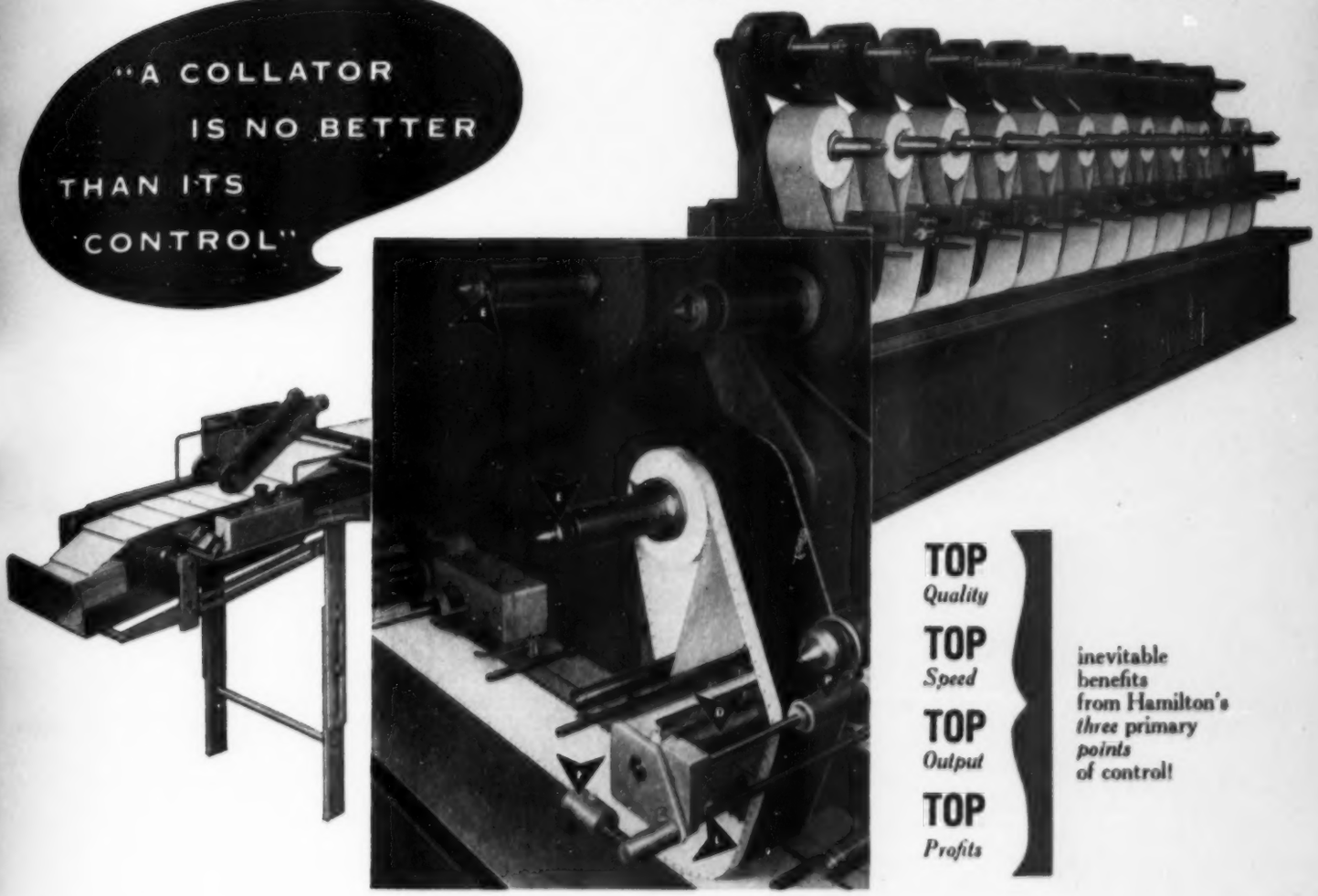
053-42A

Engineered Electrical Systems for Newspaper Plants

GENERAL ELECTRIC

Number 4 of a series of advertisements featuring Hamilton Collator "Points of Control"

"A COLLATOR IS NO BETTER THAN ITS CONTROL"



TOP *Quality*
TOP *Speed*
TOP *Output*
TOP *Profits*

inevitable benefits from Hamilton's *three* primary *points* of control!

*No. 2 Control Point ● Hamilton Collators' Automatic Web Feed Control

HOW WEB CONTROL IS ACHIEVED

● *Paper-Carbon Loop* "L" is unfailingly maintained with the proper amount of slack and consequent angle of entry onto the pinband.

● *This Is Accomplished* by automatic control of the individual web drives "P" and "D" and by the broad range of web tension adjustment.

● *Web Tension Is Adjusted* through paper roll and carbon roll brakes "E" and weights "F".

WHAT THE HAMILTON FEATURE OF AUTOMATIC WEB FEED CONTROL MEANS TO YOU!

● *Minimized Labor Requirements*:—(a) Individual paper-carbon or paper webs feed on the pinband without operation attention. (b) Non-critical adjustment of the paper and carbon roll brakes and the individual web drive pressure weights minimize set-up time.

● *Highest Quality Collation*:—(a) Smooth, uniform feed of carbon and paper webs (obviating wrinkles and tears). (b) Introduction of the paper-carbon web to the pinband consistently integrated in-register.

FOLLOW THIS SERIES

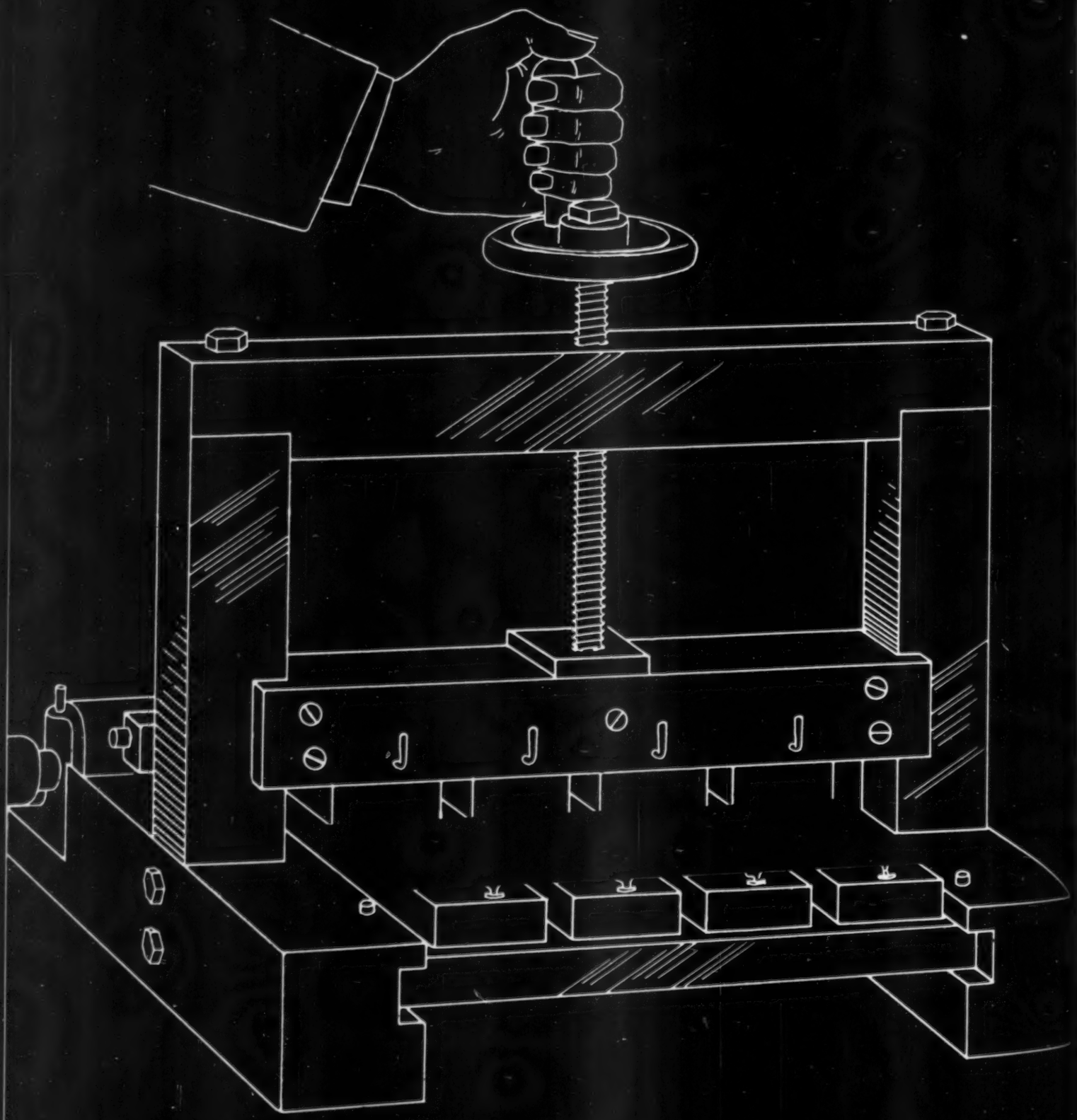
Learn the reasons for the outstanding performance of Hamilton Collators

★ Hamilton Collators' No. 1 control point, "Integral Pre-Glued Paper-Carbon Web" was outlined in the preceding advertisement and No. 3, "Full-Length Pinband", will be discussed in the succeeding advertisement.

PRECISION BUSINESS FORM MACHINERY

The HAMILTON TOOL COMPANY
910 HANOVER ST., HAMILTON, OHIO

LEADERSHIP THROUGH PIONEER RESEARCH



Here's a new quality-control tool for IPI inks which measures and helps to reduce costly plate wear

An important—but often overlooked—factor in metal plate wear comes from the abrasive action of some pigments due to their inherent characteristics or to the presence of impurities.

This IPI Plate Wear Machine was developed to simulate actual plate wear during a typical commercial press run. It enables our ink experts to measure and compare accurately the abrasive qualities of one ink with another, and to determine the amount of plate wear caused during simulated press runs.

Thus, a new scientific yardstick allows us to check and improve constantly upon our choice of pigments most suitable for longer plate life.

Such traditionally high standards of IPI quality control help increase the quality mileage of your plates during long press runs, with sharper, cleaner printing—at lower plate costs.

IPI service at work for you

Printing plants of all sizes are invited to use IPI's complete ink service facilities in printing centers from coast to coast. Each local IPI service station and branch is staffed by local experienced ink men, well-seasoned in the special printing problems of each locality. They are always on call to help you solve any printing problems—large or small—that may arise. For prompt ink service with a personal touch, contact IPI.

IPI and IC are trade-marks of Interchemical Corporation

Interchemical Corporation
PRINTING INK DIVISION • 67 W. 44th ST., NEW YORK 36, N.Y.

RELY ON IPI FOR LEADERSHIP IN INK RESEARCH

"Is GRANDPA still running this paper?"

Asks the fiery junior publisher of his easy-going parent. "He has been dead eighteen years but things are run about as he ordered them.

"That sample case of Certified Mats that I ordered gave us the best looking paper we have had in years. Now let's stay with Certifieds and give our advertisers a break."

For dependable stereotyping, rely on Certified Mats

Certified DRY MATS

CERTIFIED DRY MAT CORPORATION, 555 Fifth Avenue, Dept. M, New York 17, N. Y.

Operation of the Offset Press

By Theodore F. Makarius

This 254 page book has been written especially for the man who must makeready and operate the offset printing press.

In this 254 page book are 25 chapters and 57 pages of Case Histories for overcoming specific troubles. Some of the chapters deal with: Setting the Pressure, Inking Rollers, Dampeners, Ink Fountains, Mounting Plate and Blanket, Split Fountain Printing, Drying Problems, Register Troubles and others. Included is a six page Ink Problem Reference Chart.

Color Charts are included. One of these demonstrates difference in cleanliness of color when mixing two inks which complement each other. Another color chart has been prepared to show the result of mixing different percentages of components.

Size 5¼ in. by 7⅞ in., 254 pages, 19 illustrations. Bound in gold stamped semi-flexible cover.

Price, per copy, $10.25 postpaid

Printing Equipment Engineer

1276 West Third St. Cleveland 13, Ohio

Equipment & Supplies

(Continued from Page 8)

still mounted in position and replaced onto the cylinder for re-runs. The all metal bases are held in place by P-D Snap-On Tension Rings. Register lines are scribed on base to aid adhesive mounting. Solvent-Resisting Sealer is used to paint plate edges and keep plates positioned on base. For further details, please mention PEE No. 584 in your request.

Dispatch Room Equipment

You can now streamline your dispatch room operation with the help of new dispatch room equipment announced by Hamilton Manufacturing Co. The equipment is based on standard units of storage and assembly trays and cabinets which can be coupled together in many different ways. This variety of arrangement makes the equipment suitable for both large and small newspaper installations. The units are manufactured of formed steel and have a metallic gray finish. Each unit in the line provides for ready identification of its contents, another distinct aid in systematizing the dispatch room work.

Units in the line include several styles of mat storage cabinets for both horizontal and vertical storage of full-page size mats and smaller. Overall dimensions of the No. 7007 Full-Page Mat Storage Cabinet is 29¾ in. by 24½ in. by 37¼ in. high. Cut and signature plate storage cabinets are made in a range of basic units, too. Specially designed cabinets give storage space for both mounted and unmounted cuts. No. 7009 Cut Storage Cabinet, for mounted cuts and type high casts, is 18¼ in. by 24½ in. by 37¼ in. high. No. 7010 and No. 7011 Signature Plate Storage Cabinet, for unmounted plates, is 32 1/16 in. by 24½ in. by 37¼ in. high. Again plenty of identification is provided with label holders on the pulls and corresponding numbered strips on the cabinets.

The cut storage cabinet arrangement pictured in Fig. 1 is a series of basic units installed in a line. Custom sizes of continuous linoleum covering, sub top and banding edge can

(Continued on Page 22)

Fig. 1

New!

Kemp Introduces

Self-Contained Stereotype Pot Which Needs No Interconnecting Piping!

KEMP OF BALTIMORE

IMMERSION MELTING POTS • ATMOSPHERE & INERT GAS GENERATORS • ADSORPTIVE DRYERS • SINGEING EQUIPMENT • CARBURETORS • BURNERS • FIRE CHECKS

Ready to Use . . . Simplified Installation!

Installation of this complete packaged Kemp Model 36 CTF metal pot has been reduced to a minimum. All control wiring is done at the factory. Just position the unit, hook up fuel and power, and operate! All parts are enclosed behind steel, yet are easily accessible. Clean, modern design improves the appearance of your Stereotype Department.

Completely Safe . . . Big Capacity!

Built-in safety features include fully automatic temperature control with indicator; an auxiliary controller which cuts off fuel supply under excessive metal temperatures; and complete flame safety through an automatic cut-off in the event of flame failure! This 46″ wide x 54″ long, 6500 lb. capacity unit will cast 30 plates per hour for you, using natural, manufactured or propane gas. Heating units are recirculating type —gas fired, welded steel.

KEMP Cuts Costs up to 40%!

In thousands of installations, Kemp units cut fuel costs up to 40%. Kemp advantages can apply to your stereotype, remelt or job pot melting. Find out how Kemp engineers can help *you* to increase efficiency, save money. For complete facts and technical information, write for Bulletin IE-48.

THE C. M. KEMP MFG. CO., 405 E. Oliver St., Baltimore 2, Md.

LOOK: 600 Lines an hour from tape!

Nearly everyone in the printing business knows rush periods. *Rush* days . . . *rush* weeks . . . *rush* months. Usually rush means *over*-time. Up go expenses.

Is there a way to ease the problem?

Certainly. The answer is in the silhouette picture. For here is a linecasting machine turning out 600 lines of type an hour . . . *automatically*. That's because the machine is equipped with a Teletypesetter Operating Unit and that means over-time costs can be cut way down or even eliminated. You see, with a TTS System you get *twice* as much type hour-for-hour as with manual linecasting. And, at lower cost per line.

Teletypesetter operation is simple. Copy is prepared on a high speed Perforator in tape form. A good touch-typist can punch tape at speeds of 400 or more lines per hour. Then, the tape feeds into the Teletypesetter Operating Unit installed on a linecasting machine. Type is cast automatically! 400 or more lines an hour on a standard machine. 600 or more on a high speed linecaster.

The coupon below will bring you complete information on how Teletypesetter can DOUBLE your OUTPUT of type.

TELETYPESETTER

TELETYPESETTER CORPORATION, DEPT. PE 10
2752 N. CLYBOURN AVENUE
CHICAGO 14, ILLINOIS

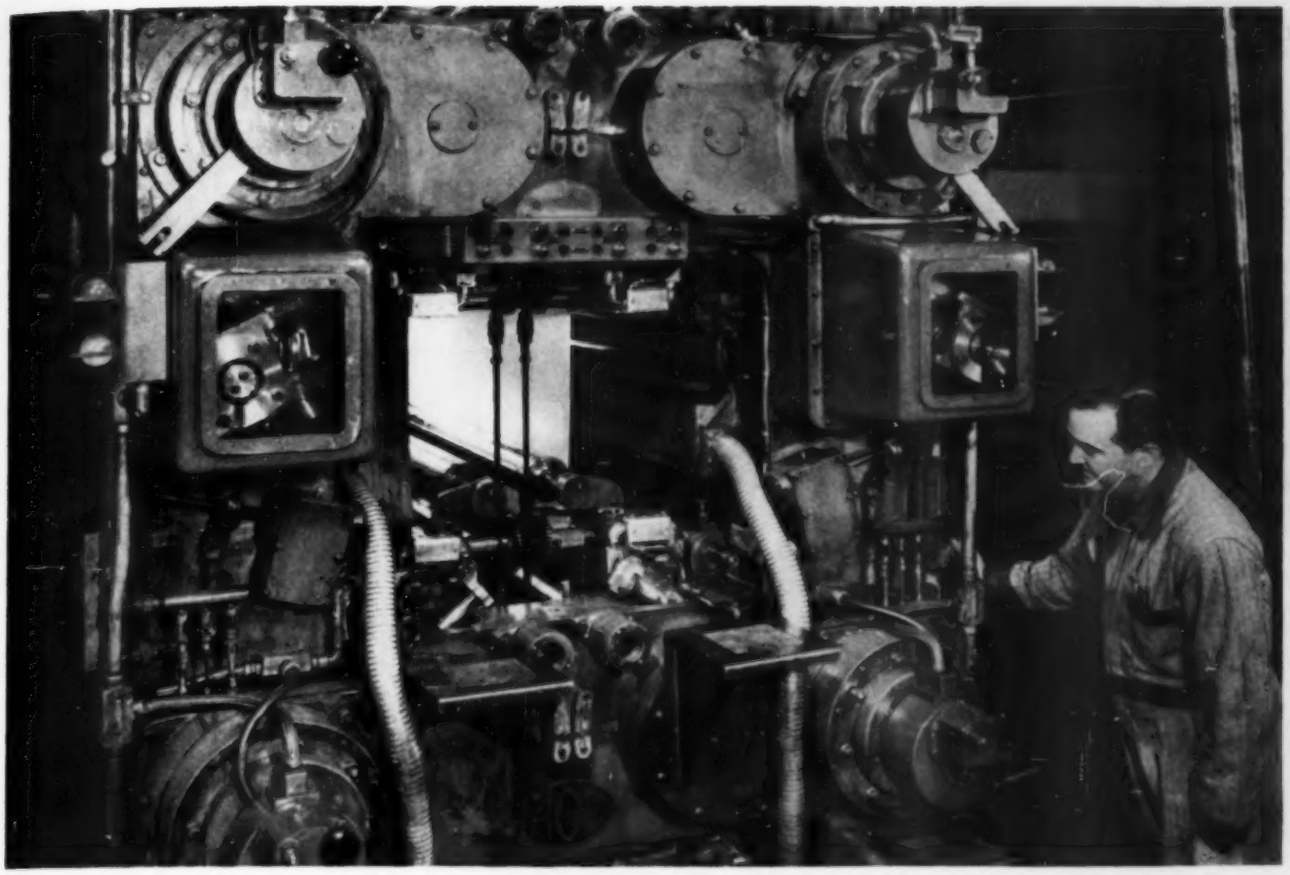
Please send me information on how Teletypesetter can DOUBLE my OUTPUT of type.

Name _____

Company _____

Address _____

City _____ **Zone** _____ **State** _____



How to maintain multi-color register

AUTOMATICALLY

. . . at all operating speeds

There's just one way to have completely satisfactory . . . automatic . . . color register control. It's the Hurletron way.

Hurletron controls are not new. They're time-tried and proven. The largest and finest color-rotogravure printers in country have used Hurletron Color Register Controls for years. They've become standard equipment. Now they are available for ROP color . . . and are in successful operation by leading dailies.

Your Hurletron Control will maintain accurate, automatic register of all colors within a few thousandths of an inch. The register established at low speeds will be maintained up to highest operating speed. And it will make high speed corrections at splices, materially reducing the number of bad copies.

Here's the practical, proven method of insuring top quality ROP color register . . . hour after hour. It's speedy . . . simple to operate . . . dependable . . . and fully automatic.

Let us show you how this remarkable equipment can help you. And be sure to ask for our latest booklet on ROP Color Register Control.

HURLETRON

AUTOMATIC
Register Control
for R.O.P. Color

ELECTRIC EYE EQUIPMENT COMPANY

1930 EAST FAIRCHILD STREET, DANVILLE, ILLINOIS

Manufacturers of: Hurletron R.O.P. Color Registration Controls; Automatic Controls of Caliper and Weight on Paper and Board; Center Line and Side Web Guide Controls; Cut-Off and Back-Up Controls; Slitter Controls; Moisture Controls.

The PRESSMAN knows

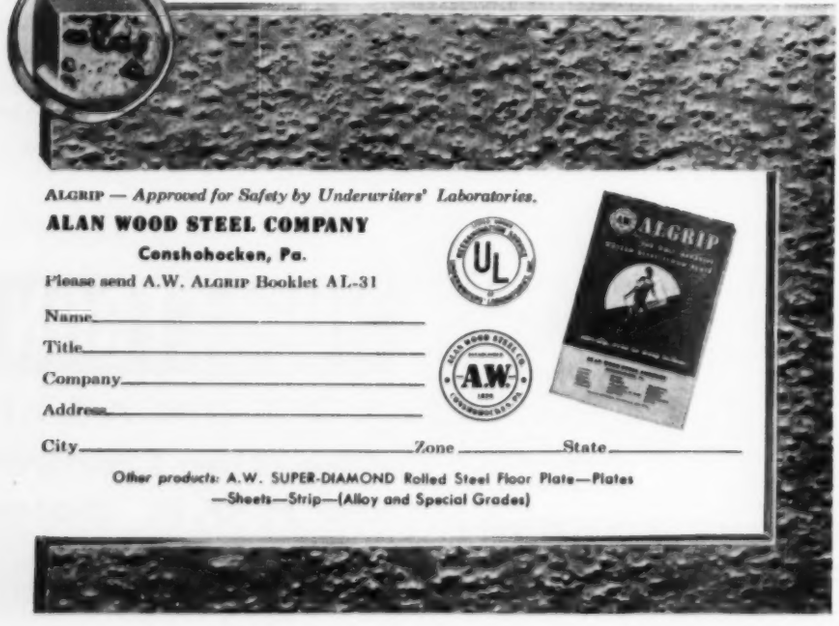
. . . The man in the pressroom plays a full share in the fast action that makes the American printing industry a marvel of swift and accurate production.

The pressman knows that his footing is safest . . . when he works in the pressroom of one of the great printing plants which have learned the value of ALGRIP . . . the only abrasive rolled steel floor plate in the world.

He may not even know, offhand, the trade name of the flooring underfoot . . . but the man who works on ALGRIP flooring, walkways and crossovers *is confident that he won't slip.* The depth-controlled ALGRIP abrasive sees to that.

And his employer knows that his lower insurance costs . . . and saving in lost man-hours . . . are helping ALGRIP to pay for itself.

A.W. ALGRIP ABRASIVE ROLLED STEEL FLOOR PLATE



ALGRIP — *Approved for Safety by Underwriters' Laboratories.*

ALAN WOOD STEEL COMPANY
Conshohocken, Pa.

Please send A.W. ALGRIP Booklet AL-31

Name_____

Title_____

Company_____

Address_____

City_____ Zone_____ State_____

Other products: A.W. SUPER-DIAMOND Rolled Steel Floor Plate—Plates —Sheets—Strip—(Alloy and Special Grades)

Equipment & Supplies

(Continued from Page 18)

be purchased from the Hamilton factory. Installation of the top is to be done locally.

The dispatch tray cabinet, such as the one pictured in Fig. 2, can be

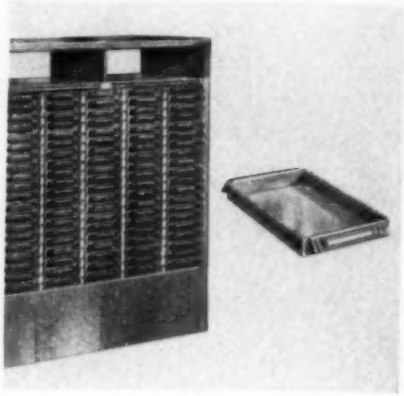


Fig. 2

made up with any number of tiers to fit individual requirements. The trays are accessible from both sides of the cabinet. As ad material is assembled, it is put into trays and placed in the dispatch cabinet until the makeup room is ready for it.

Another unit in the dispatch room equipment line produced by Hamilton is the dispatch tray truck (Fig. 3). This truck saves time and steps in transporting loaded trays bearing completed ad composition from the dispatch room to the makeup department. Trays are accessible from either side of the truck and are readily identifiable by numbers on the truck. Overall dimensions: 21 in. by 17 in. by 38½ in. high.

This dispatch room equipment is designed to be arranged for straight

(*Continued on Page* 28)

SOLD BY

Western Newspaper Union

E. C. Palmer & Co.

Harry W. Brintnall Co.

DON'T GET YOUR SIGNALS CROSSED

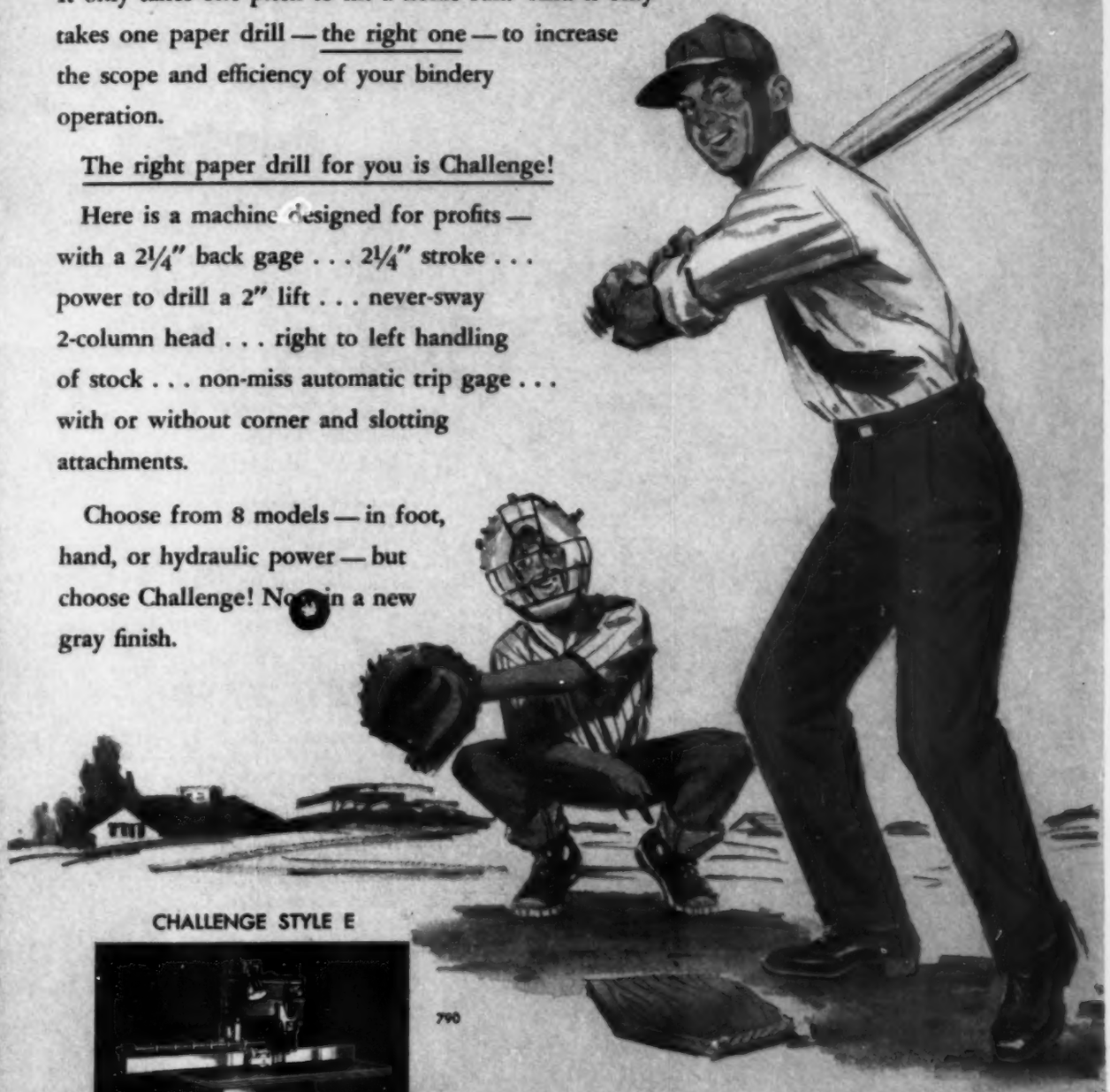
Always Specify CHALLENGE — *for the finest in paper drills!*

It only takes one pitch to hit a home run. And it only takes one paper drill — the right one — to increase the scope and efficiency of your bindery operation.

The right paper drill for you is Challenge!

Here is a machine designed for profits — with a 2¼" back gage . . . 2¼" stroke . . . power to drill a 2" lift . . . never-sway 2-column head . . . right to left handling of stock . . . non-miss automatic trip gage . . . with or without corner and slotting attachments.

Choose from 8 models — in foot, hand, or hydraulic power — but choose Challenge! No. 790 in a new gray finish.



CHALLENGE STYLE E

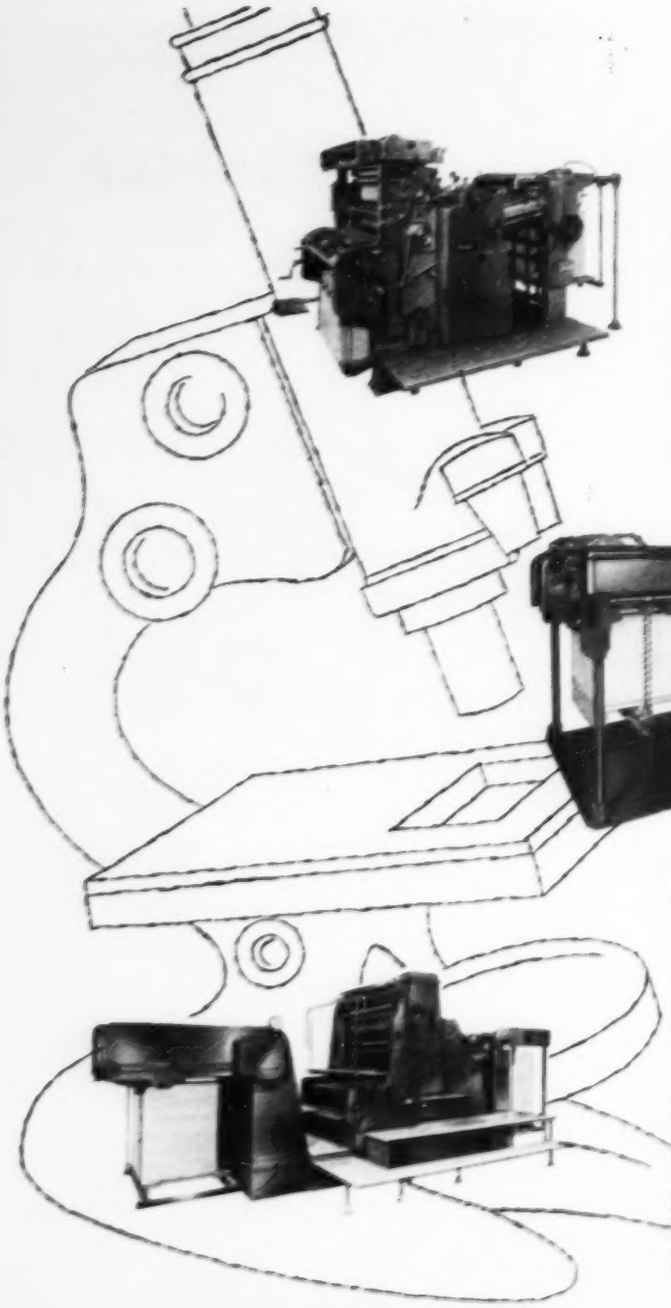
790

THE CHALLENGE MACHINERY COMPANY

Office, Factories and Show Room:
GRAND HAVEN, MICHIGAN

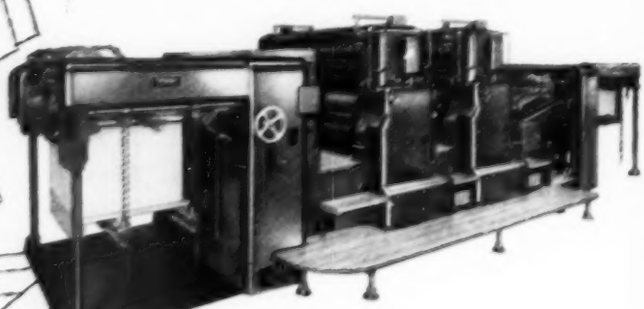
DEALERS IN ALL PRINCIPAL CITIES

Challenge
TRADE-MARK ®



Investigate before you invest!

Investigate Miehle's Complete Line of Offset Presses . . .



Before you Invest Investigate Miehle

- Improved Stream Feeding
- Swing Gripper Transfer
- True Rolling
- Superior Inking and Dampening
- Automatic Lubrication
- Positive Sheet Control from Feeder through Delivery

On any basis of comparison Miehle Offsets are the soundest investment you can make—an investment that will pay dividends year after year after year. For full information on Miehle Offsets write The Miehle Printing Press & Manufacturing Company, Chicago 8, Illinois

PRESS	SHEET SIZE	SPEEDS UP TO
23 Single Color	23 x 29	
25 Single Color	23 x 35	
41 Single Color	30 x 42	
41 Two Color	30 x 39	
49 Single Color	35 x 49½	
49 Two Color	35 x 49½	
61 One to Five Color*	42 x 58	
75 One to Five Color*	52 x 76	

* The Miehle 61 and 75 Offsets are built on the Unit Construction principle and are available in one, two, three, four, and five color presses.

The Miehle

Leader among the world's manufacturers of fine printing equipment.

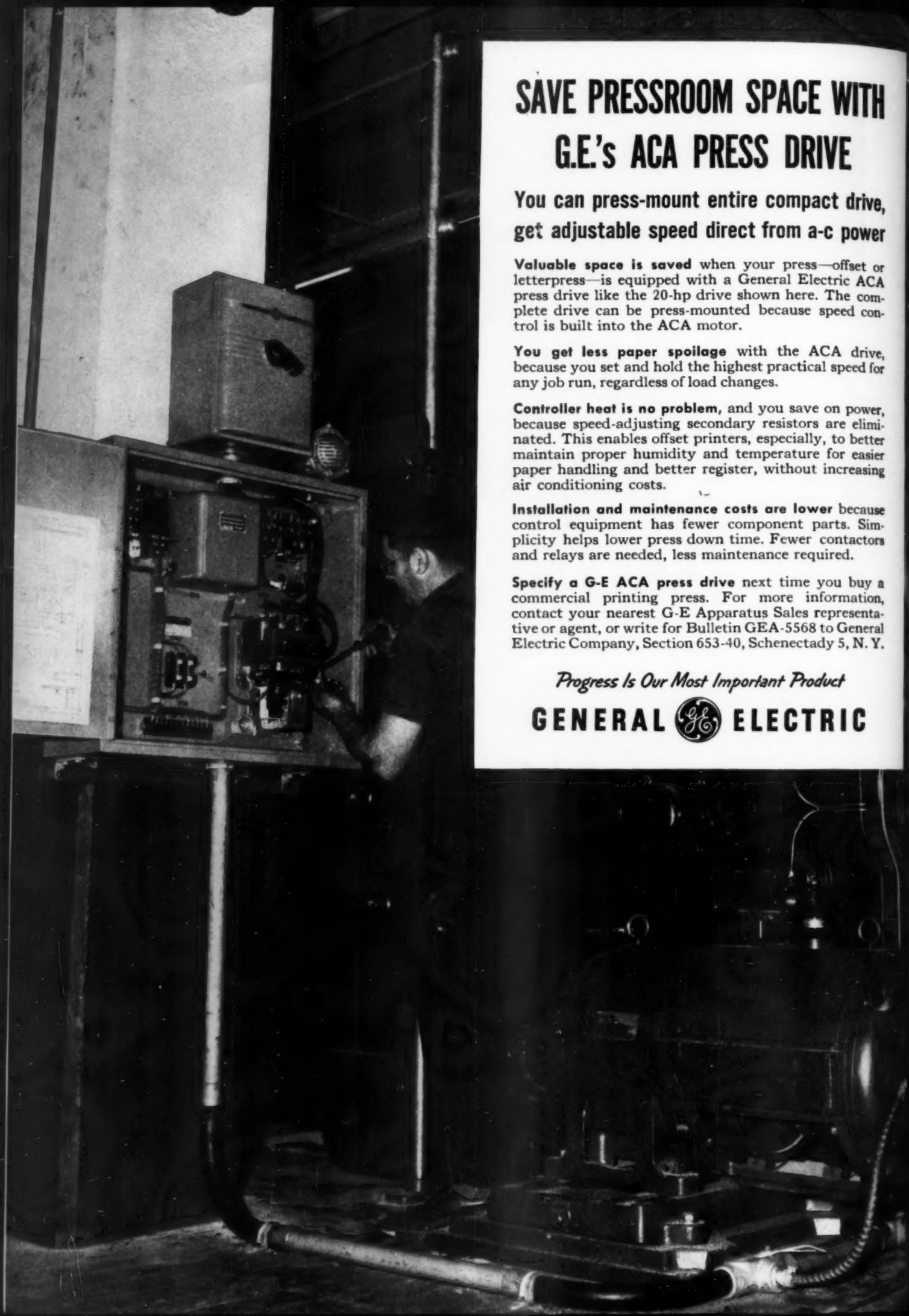
for FULL RANGE OF TINTS

THERE'S NOTHING LIKE MERCURY ROLLERS and BLANKETS

In color work particularly the ability of these rollers and blankets to reproduce every tint and tone value exactly as intended is very important. These rollers and blankets provide coverage of maximum density on solids. At the same time they release only the exact amount of ink needed for the most delicate tints. This means the saving of many hours of makeready for fine color jobs. When craftmanship counts, count on Mercury.

RAPID ROLLER CO.
FEDERAL AT 26TH STREET, CHICAGO 16, ILLINOIS

Eastern Office:
800 McCARTER HIGHWAY, NEWARK, N. J.



SAVE PRESSROOM SPACE WITH G.E.'s ACA PRESS DRIVE

You can press-mount entire compact drive, get adjustable speed direct from a-c power

Valuable space is saved when your press—offset or letterpress—is equipped with a General Electric ACA press drive like the 20-hp drive shown here. The complete drive can be press-mounted because speed control is built into the ACA motor.

You get less paper spoilage with the ACA drive, because you set and hold the highest practical speed for any job run, regardless of load changes.

Controller heat is no problem, and you save on power, because speed-adjusting secondary resistors are eliminated. This enables offset printers, especially, to better maintain proper humidity and temperature for easier paper handling and better register, without increasing air conditioning costs.

Installation and maintenance costs are lower because control equipment has fewer component parts. Simplicity helps lower press down time. Fewer contactors and relays are needed, less maintenance required.

Specify a G-E ACA press drive next time you buy a commercial printing press. For more information, contact your nearest G-E Apparatus Sales representative or agent, or write for Bulletin GEA-5568 to General Electric Company, Section 653-40, Schenectady 5, N. Y.

Progress Is Our Most Important Product

GENERAL ELECTRIC

Turn WALKING Time Into WORKING Time

with MORRISON SAW TRIMMERS

Check with a Morrison owner for proof.
Write for prices and illustrated folders.

MORRISON 3-A SAW TRIMMER

Today's fastest, most versatile, safest, most accurate Saw Trimmer! Features include: "Behind the Gauge" Workholder, 135-pica Extension Gauge, Miter and Line-up Gauge, Any-Angle Gauge, Saw Grinder, and many others. One of FOUR Standard Models.

Other Morrison Equipment Includes:

Slug Strippers,
Plate Bevelers,
Router and Type High Planers.
Write for catalog.

Symbol of Operating Economy

THE MORRISON COMPANY

THE Morrison COMPANY

PRECISION MACHINES FOR THE GRAPHIC ARTS INDUSTRY

125 W. Melvina Street, Milwaukee 12, Wisconsin

This group attended Research and Engineering Council meeting in Boston, May 11 to 13, inclusive. (Left to right): Samuel M. Reed, assistant to the president, Photon, Inc.; Walter S. (Bud) Reed, vice president, Dexter Folder Co.; William W. Garth, jr., president, Photon, Inc.; A. J. Powers, jr., president, Chemco Photoproducts Co., Inc.; James J. Trier, manager offset, R. Hoe & Co., Inc.

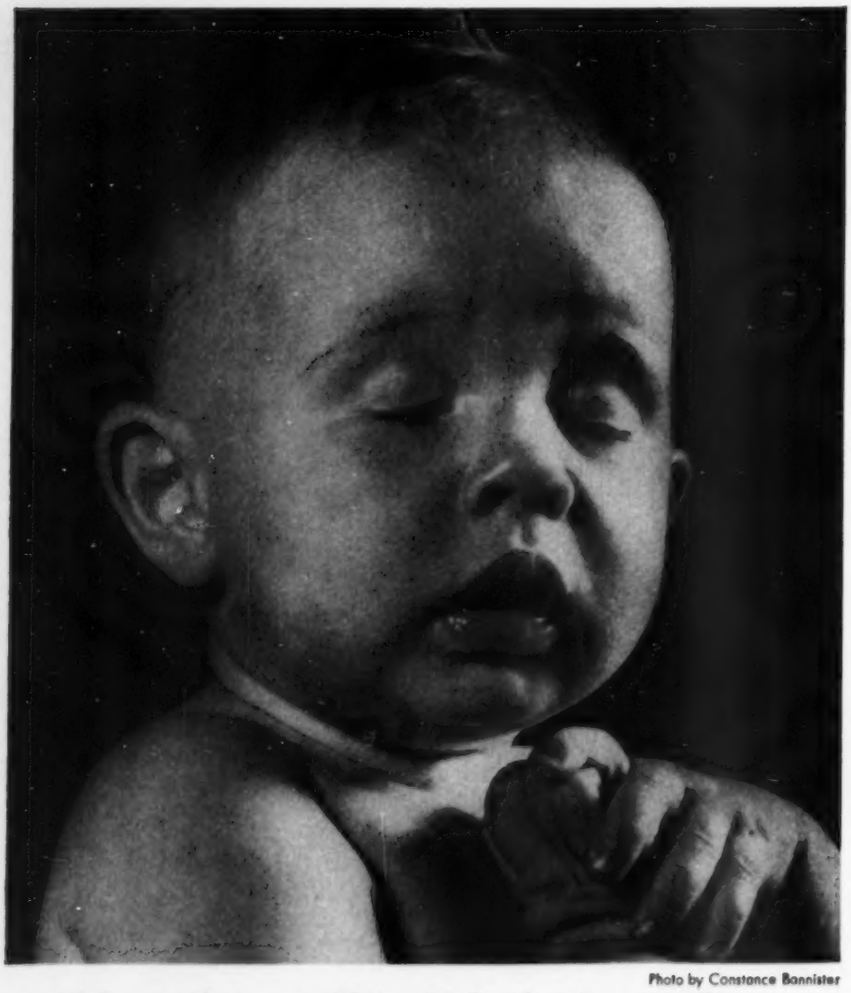


Photo by Constance Bannister

"Why... they wouldn't think of using anything but Burgess Mats!"

BURGESS CELLULOSE COMPANY

Manufacturers and Distributors of Burgess Chrome and Tone-Tex Mats

Freeport, Illinois

A Laboratory Product
BURGESS Chrome MATS

Equipment & Supplies

(Continued from page 22)

line assembly work. However, the units may be lined up against a wall, two lines of cabinets placed back to

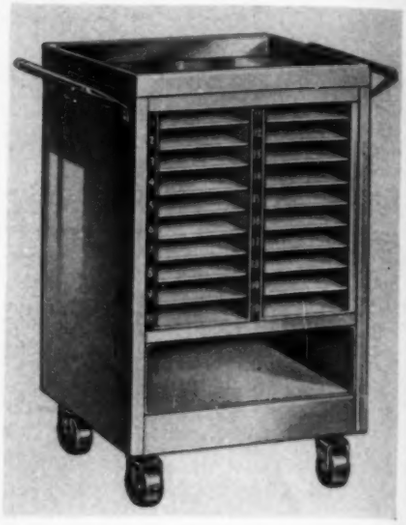


Fig. 3

back, or island work tops may be made from two or more units according to floor space available. Filler or desk top units can be inserted to jump gaps or to by-pass pillars.

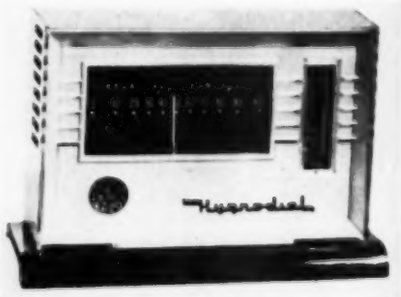
For further details, please mention PEE No. 576 in your request.

New Type Face

The production of a new Clarendon-style type face, which will be known as Craw Clarendon, has been announced by American Type Founders. The type was named after its designer, Freeman Craw, art director of Tri Arts Press in New York, N. Y. Letterform was drawn from the earlier Clarendon style with a more consistent stroke weight. Type is available from 8 pt. to 60 pt. and a 72 pt. will be introduced if demand warrants it. For further details, please mention PEE No. 581 in your request.

Humidity Indicator

Abbeon Supply Co. announces a new direct reading humidity and temperature indicator called the



Model No. 187 Hygrodial. The humidity scale is 2½ in. long and is graduated into divisions from 0 to

(Continued on Page 30)

ONLY: OXY-DRY PRECISION ENGINEERING

GIVES YOU ALL THESE COMPETITIVE ADVANTAGES

GREATER PRESS SPEEDS
more impressions per hour

REDUCES REJECT SHEET WASTE
more deliverable sheets

PERMITS FULL PRESS LOADS
faster job handling time

USES LESS OFFSET POWDER
costs less to operate

FASTER SETTING & DRYING OF INK
less waiting time for next operation

ELIMINATES STATIC ELECTRICITY
"plumb-bob" jogging on press delivery

MUCH LESS SERVICE & MAINTENANCE
fill it...set it...forget it operation

ANY *one* of the above advantages would make OXY-DRY superior to any and all other offset prevention methods. Combined, they give the printing plant that has OXY-DRY equipment a tremendous competitive advantage that simply means more business, more profits and more satisfied customers.

If you want to increase the number of impressions per hour for every press in your plant, then you need OXY-DRY sprayers... write, wire or phone us today for more details.

OXY-DRY THE ONLY RIGHT INK OFFSET PREVENTION PROCESS

OXY-DRY SPRAYER CORPORATION

NEW YORK CHICAGO SAN FRANCISCO

320 South Marshfield Avenue, Dept. PE,
Chicago 12, Illinois

GET IT..

OXY-DRY SPRAYER CORPORATION
320 S. Marshfield Ave.
Chicago 12, Illinois

We are interested in OXY-DRY Sprayers:
send more information ☐
or your representative. ☐

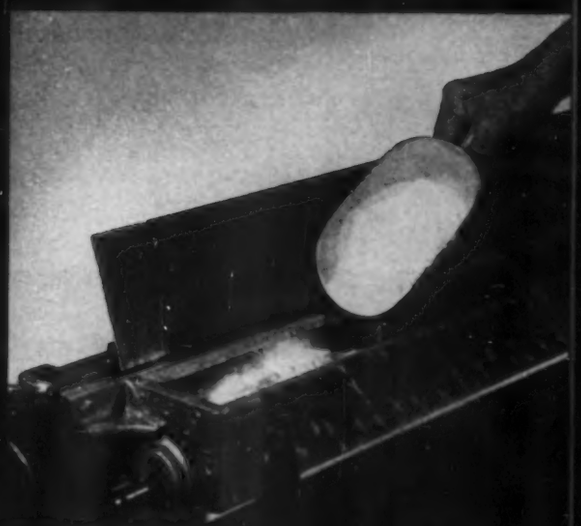
Firm Name_____

Address_____

City_____ Zone___ State_____

Individual_____

FILL IT..



SET IT..

FORGET IT!

NEW ENGLAND NEWSPAPER SUPPLY CO.

Consolidated with

NEW ENGLAND FIBRE BLANKET COMPANY

164 FREMONT STREET • WORCESTER, MASSACHUSETTS

GARDENER G. DeMALLIE, General Manager

NEW YORK OFFICE · CHICAGO OFFICE · SOUTHWEST OFFICE · WEST COAST OFFICE

Capco REWINDER

- Rolls lifted from the bottom by hydraulic lifts. No overhead lift.
- Low splicing table at operator's side for easy accessibility.
- No shafts, no chucks with input and output roll center close to floor to minimize lifting and lowering.
- Slitter cuts damaged paper from full roll to ¾ size or ¾ to ½ size saving up to 75% of damaged roll.
- Rolls, out of round, can be rewound thereby increasing production by not having to slow press to accommodate jumping roll.

Get further particulars from

CAPITAL TOOL & MANUFACTURING CO.

5000 Calvert Rd. • College Park, Md. • Union 4-7677

Equipment & Supplies

(Continued from Page 28)

100% humidity. This instrument contains a new type of hair element with a spring mechanism that allows the pointer to move with ease for comparatively rapid sensing of relative humidity changes, says the manufacturer. The temperature scale is 1½ in. high and covers a range of 0 deg. to 110 deg. It is accurate to within 1 deg. at 70 deg. F and to within 3 deg. at the extremes, according to the sponsor. Overall dimensions are 6 in. by 4 in. by 2½ in. deep. For further information please mention PEE No. 580 in your request.

Mead Bond Labels

The Mead Corporation has recently added a color identification label to its cartons of Mead Bond. The label is affixed to the upper right hand corner of the carton. Name of color is printed in bold face type. Further identification is provided by having background of the label printed in same color as the Mead Bond enclosed in the carton. The labeling system promotes ease of storing and locating various colors. For further details, please mention PEE No. 568 in your request.

D.C. Motor Speed Controls

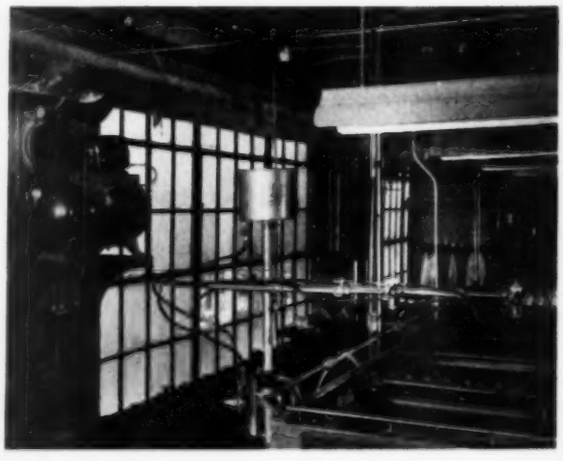
Electric Regulator Corp. announces a new line of d.c. motor speed controls. The 1/15 h.p. control is available now; other larger units will be available. The units are designed to deliver stepless motor speed control from dead stop to above base speed. Motor speed is set by the operator and thereafter remains constant with 2% in spite of line and load variations, says the manufacturer. The speed sensing element is the Regohm unit, a high gain fingertype regulator. For further details, please mention PEE No. 574 in your request.

Xerographic Offset Platemaking

Positive working metal offset plates can now be prepared through

(Continued on Page 86)

Solenoid-Actuated Spray System — Solenoid-actuated low pressure spray equipment has been installed by the maintenance department of the Hoyer Printing Co. of Milwaukee, Wis. Installed on five Miehle 25 in. by 38 in. presses, this A-P Controls Corp. application enables operation with a 5 h.p. compressor at 165 lbs. max. capacity. Sesco double stainless steel spray heads, actuated by A-P Model 73 solenoid valves, which in turn are controlled by Allen-Bradley limit switches, are employed in the system. For further details, please mention PEE No. 570 in your request.



SHOWERS
CHICAGO DAILY NEWS
★ An Independent Newspaper ★
5¢
FINAL
80TH YEAR—187 WEDNESDAY, AUG. 10, 1955 34 PAGES
We're Betting $11 Million on Chicago
DAILY NEWS EXPANSION PLANS
Mind's Made Up
Over Connie's 'Eye'
New, Faster Color Presses
Addition to Present Building Will House Modern Equipment
It began July 29, when Arthur E. Hall, general manager of the Daily News, signed the biggest single contract for newspaper presses in history.
This was for 66 high speed, full color units to be manufactured by the Goss Printing Press
I WILL
Begin
linas
Program Planned for Years
GOSS

Another Mark of Confidence

The *Chicago Daily News'* expansion program, Editor and Publisher John S. Knight explained, is based on three great faiths: Faith in the continued prosperity and growth of America; faith in the continued prosperity and growth of Chicago; and faith in the continued prosperity and growth of the *Chicago Daily News.*

To meet the production requirements of this tremendous future and to improve service to readers and advertisers, the *Daily News* chose the finest newspaper press equipment which will "permit unequaled flexibility in the use of full color in advertising and news pictures."

The *Daily News* order includes 66 HEADLINER units, 44 single color cylinder arrangements, 11 folders and Goss Reels-Tensions-Pasters.

In the 11 years since Mr. Knight assumed control of the newspaper, circulation has increased 40 per cent to a five-day average of 595,586 and advertising linage has swelled 78 per cent to a total of 11,190,250 for the first six months of 1955.

The new HEADLINER presses will enable the *Daily News* to carry still more advertising and to produce larger editions faster, with finest black and full ROP color printing—and with maximum efficiency.

THE GOSS PRINTING PRESS CO.

NEW Staude "1000"

BRINGS VERSATILITY TO OHIO BOXBOARD GRAVURE DEPARTMENT

The Ohio Boxboard Co. plant at Rittman, Ohio, has installed a Five Color Staude "1000" Rotogravure Press, a Staude Butt Splicer and an in-line Mercury Die Cutter-Creaser. This combination, equipped with a new web tension control system, is the closest approach to automation in the industry.

Ohio Boxboard knows well the quality, speed and cost advantages of gravure. This new Staude installation with its larger cylinders and design for quick change, adds the big operating advantage of versatility. Frank Kulow, Gravure Supervisor, says of the new Staude, "We are very enthusiastic about the potential of the gravure process and are looking forward to top product quality, uniformity and production."

- √ Prints webs up to 45" wide with 23" to 46" circumference engraved cylinders—a production bonus of 20% to 25% on every impression.
- √ Continuous press operation achieved with Turn Over Roll Stand, Automatic Butt Splicer and Mercury Die Cutter-Creaser.
- √ Fast changeover of only 15 minutes per color—each color station is a complete rotogravure printing unit.
- √ New web tension system in electric drive assures accurate register.

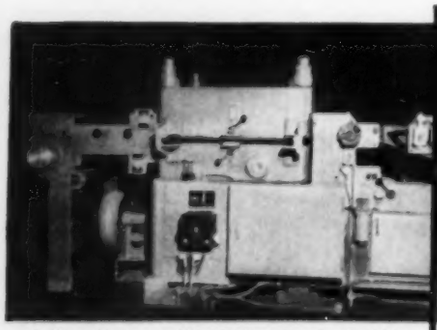
Write for Staude "1000" Bulletin

E. G. Staude MANUFACTURING CO., INC.

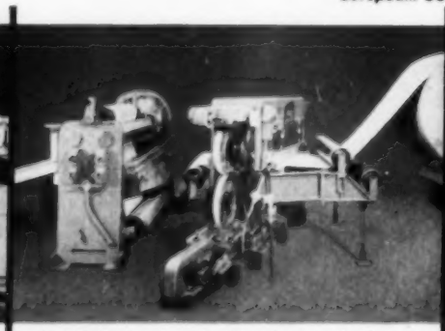
2675 UNIVERSITY AVENUE • ST. PAUL 14, MINNESOTA

Eastern Office: 35 Beechwood Ave., Mt. Vernon, N. Y.

European: 33 Firs Drive, Cranford, England



In-line Mercury Die Cutter-Creaser's 200 strokes per minute allows continuous operation.



Butt Splicer automatically splices web of one roll to another without stopping the press.

Turn-Over Roll Stand brings all sizes of roll stock into position for uninterrupted splice.

It's Huber for ROP Colors: ANPA Standards or Specials Tailored to Your Needs

HUBER INKS

Our representative will help you work out your requirements

J. M. Huber Corporation

Hillside and Bayonne, N. J. • Chicago, McCook and East St. Louis, Ill. • Baytown and Borger, Texas • Boston, Mass. • St. Louis, Mo. • Huber, Ga.

THE SUCCESSFUL
UNIT DRIVE FORMULA

Keep it simple–Keep it sturdy
KEEP IT CUTLER-HAMMER

A modern metropolitan newspaper press calls for the utmost dependability in all its parts . . . if its segments, never in total view or under total control of one person, are to gear and mesh and integrate *dependably*.

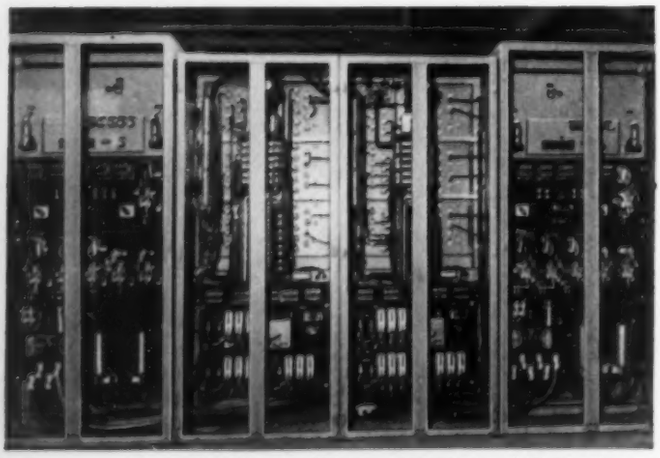
And the dependability formula calls for the simplest means of gaining the specified ends—which in the minds of a growing number of newspaper production people calls for Cutler-Hammer Control on the unit press drives.

The story on the Cutler-Hammer unit press drive control is this: Paired with simple, sturdy, a.c. wound rotor *unit* motors are Cutler-Hammer unit controls embodying simple, sturdy industrial control designs that every plant electrician knows and can *understandingly* service.

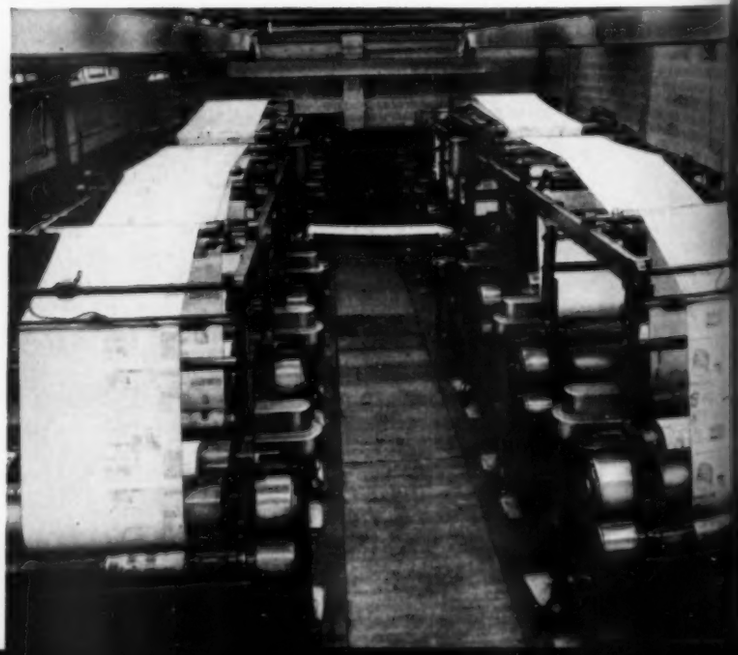
From this dependable combination you get every possible function you can require. But you get it *simply*—without headaches and without heartaches. Inching, threading, satin-smooth acceleration, high efficiencies all the way up! *REAL* synchronization of unit motors, flexibility . . . and blessed freedom from trouble.

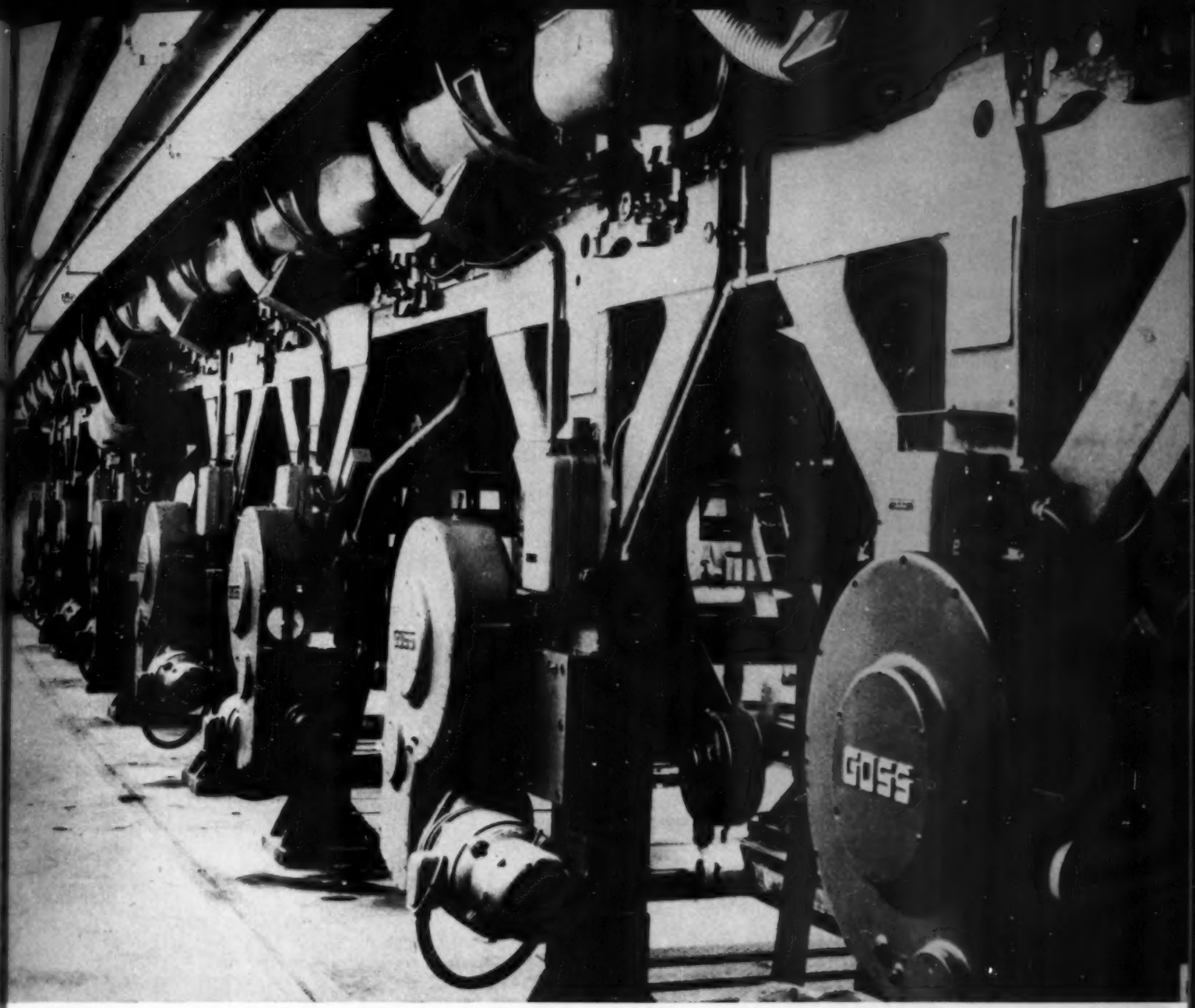
Details? Take a look at the C-H cam drum accelerator with 83 speed points. Note that inching and threading *DON'T* draw current through the battery of unit motors. No changing load adjusting resistor switches. No unbalanced loads. No circulating currents or excessive peaks. *Your* electrician can service this drive and he can service this control. Get these facts and many more from the Cutler-Hammer engineering representative.

CUTLER-HAMMER, Inc.,
1360 St. Paul Ave.
Milwaukee 1, Wisconsin



Cutler-Hammer Electronic Control and Single Motor Drive on 48 page Goss Press at
THE BRANTFORD (Ont.) EXPOSITOR
The publisher, John C. Preston, writes:
"We are very pleased with the operation of (the drive). Most satisfactory in daily operation."



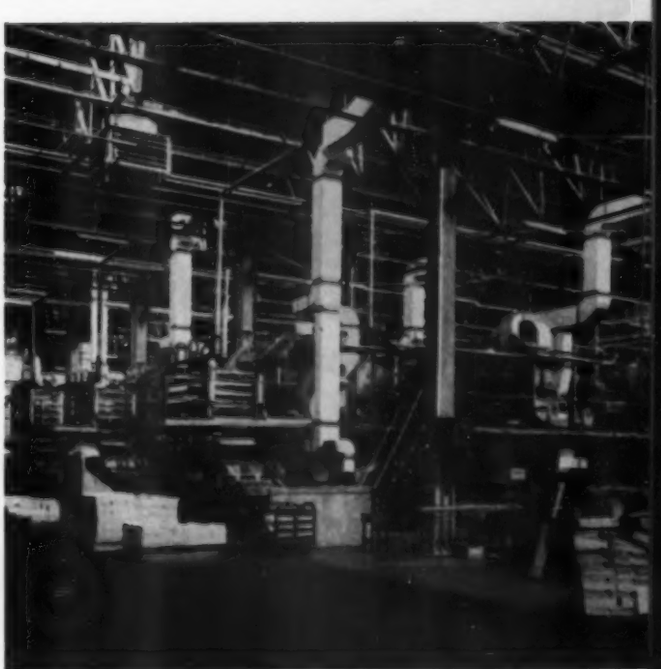


Cutler-Hammer Unit Drive Control serves S. Carolina's biggest newspapers
THE STATE and COLUMBIA RECORD
with a combined daily circulation of 110,000 copies. Now in their new $1,500,000 plant, printing on their new 8-unit Goss Headliner press with a normal running speed of 52,500 sixty-four page standard format newspapers per hour. Total capacity 96 pages.

CUTLER-HAMMER
WEB BREAK DETECTORS
Stop press instantly if web breaks. Web can be rethreaded without latching detectors. Easy to mount.

CUTLER-HAMMER
WEB SEVERING DEVICE
A Cutler-Hammer "original" that has resulted in greater total savings than any other single accessory. It instantly slashes broken web close to impression and guards against destructive wrap-arounds and costly delays—resets automatically.

CUTLER·HAMMER
MOTOR CONTROL
C·H



Cutler-Hammer Press Drives and Control in
CUNEO EASTERN PRESS PLANT
These Babcock 64 page 2 color magazine presses in the Cuneo Eastern Press Plant at Philadelphia are equipped with Cutler-Hammer a.c. 2 motor press drives and control.

Mailing-room costs going up?

Bring them down with a SIGNODE Automatic Wire Tying Machine

first choice of more than 350 newspapers world-wide

If your daily press run is 50,000 or more, one or more Signode Automatic Wire Tying Machines can help you make *permanent* reductions in mailing-room operating costs.

You can effect reductions in labor costs, use your manpower most efficiently, meet all delivery deadlines, and assure your customers of tight, windproof bundles with added protection against pilferage.

Today, 350 newspapers all over the world are using Signode machines—many of them continuously for more than 30 years! In fact, the reputation of Signode's machines for dependability is so widely accepted, that over 30 newspapers with circulations in the area of 50,000 use only ONE machine.

Find out for yourself how Signode has eliminated the causes of tie-ups—how these heavier, sturdier wire tying machines can put your mailing-room cost savings on a permanent basis. Write:

SIGNODE

Steel Strapping Company

2667 N. Western Ave., Chicago 47, Ill.

SIGNODE

this seal means security in shipping

Offices Coast to Coast.
In Canada: Canadian Steel Strapping Co., Ltd.
Montreal • Toronto
Foreign Subsidiaries and Distributors World-Wide

HOE PRESS

to take advantage of the latest improvements in press construction

The lusty postwar bull market has been outrun by its leading reporter — the JOURNAL! The sixty-six-year-old voice of Wall Street has not only kept pace with the surge in investments and investors — but has broadened its editorial scope and its circulation to cover all significant business activity. It now serves *completely* the "men who get ahead."

Recent strides made by the JOURNAL include 500% increased national advertising linage and 600% increased circulation in the last ten years, and of course the purchase of the new, cleanlined, 4-unit HOE press for its New York plant to help do its bigger job better. Or — in its own words — "to take advantage of the modern developments in the HOE press, and to ease our press problems."

R. HOE & CO. INC.

910 East 138th Street New York 54, N.Y.
BRANCHES: BOSTON • CHICAGO • SAN FRANCISCO
BIRMINGHAM • PORTLAND, ORE.

IN 58 CORNERS OF THE U.S.A.—

Cline-Westinghouse SERVICE!

WITH DAY AND NIGHT PHONES CLINE AND WESTINGHOUSE HAS SET NEW HIGHS IN STANDARDS OF SERVICE

For the overwhelming number of newspapers ordering and installing Cline-Westinghouse Drives and Controls, three Cline Electric Service Offices and 55 Westinghouse Engineering and Service locations, with qualified factory trained men, are located strategically over the U.S.A.—all on 24-hour alert.

FOR DAY OR NIGHT SERVICE . . . CALL CLINE FIRST

Cliffside 4-7500, Chicago
Vanderbilt 6-0701, New York
Madison 6-3881, Los Angeles

Contact first your closest Cline office!

These Cline offices are backed up by Westinghouse's Engineering & Service locations — also available for service!

Akron, Ohio	JEfferson 3165
Atlanta, Georgia	ATwood 1642
Baltimore, Maryland	PLaza 2-0300
Beaumont, Texas	4-1481
Birmingham, Alabama	53-2411
Boston, Massachusetts	Liberty 2-0600
Bridgeport, Connecticut	4-0151
Buffalo, New York	WAshington 3966
Charlotte, North Carolina	6-6461
Cincinnati, Ohio	GArfield 2250
Cleveland, Ohio	CHerry 1-7600
Columbus, Ohio	MAin 5527
Dallas, Texas	Riverside 5231
Davenport, Iowa	3-2761
Denver, Colorado	KEystone 8121
Des Moines, Iowa	2-0244
Detroit, Michigan	TRinity 2-7010
El Paso, Texas	2-5691
Fresno, California	4-3097
Grand Rapids, Michigan	9-3105
Houston, Texas	CHarter 4691
Huntington, W. Virginia	7146
Indianapolis, Indiana	MArket 3301
Jackson, Michigan	2-0519
Kansas City, Missouri	HArrison 7122
Louisville, Kentucky	CLay 0212
Memphis, Tennessee	8-8546
Milwaukee, Wisconsin	BRoadway 6-1800
Minneapolis, Minnesota	GIlanville 3545
Newark, New Jersey	MArket 2-0200
New Orleans, Louisiana	RAymond 8656
Norfolk, Virginia	5-1639
Omaha, Nebraska	ATlantic 7793
Philadelphia, Pennsylvania	EVergreen 2-1200
Phoenix, Arizona	ALpine 4-3158
Pittsburgh, Pennsylvania	ATlantic 1-8400
Portland, Oregon	CApitol 1-9151
Providence, Rhode Island	GAspee 1-0818
Richmond, Virginia	2-4758
Roanoke, Virginia	6263
St. Louis, Missouri	CEntral 1-1120
Salt Lake City, Utah	5-3413
San Diego, California	Franklin 8151
San Francisco, California	EXbrook 2-5353
Seattle, Washington	MAin 0808
Spartanburg, South Carolina	7652
Spokane, Washington	EMpire 3371
Springfield, Massachusetts	6-8373
Syracuse, New York	2-1361
Toledo, Ohio	GArfield 4625
Tulsa, Oklahoma	3-3191
Utica, New York	4-1194
Washington, Dist. of Col.	NAtional 8-8843
Wilkes-Barre, Pennsylvania	3-1144
Youngstown, Ohio	4-1118

Westinghouse

CLINE ELECTRIC MANUFACTURING COMPANY
3405 West 47th Street, Chicago 32, Illinois
Los Angeles 17, California • New York 17, New York

For the Wear and Tear *ON BUSINESS FORMS—*

SPECIFY Maxwell Bond

Wear and tear on business forms caused by rough and repeated handling can be costly in terms of time, temper, and paper. Business forms printed on Maxwell Bond have a remarkable resistance to this kind of punishment and give you durable, legible records at low cost. Maxwell Bond is receptive to all writing instruments—including ball-point pens.

We're so proud to recommend Maxwell Bond for utility business uses that we've identified it with our watermark!

We'd be pleased to show you samples of MAXWELL BOND'S six colors, four weights and six finishes. Just send your letterhead.

Maxwell Bond

America's Favorite Low-Cost Bond

HOWARD PAPER MILLS, INC. • MAXWELL PAPER COMPANY DIVISION • FRANKLIN, OHIO

Uncle Mat Says:

a a A a a A a a A a a A

"THE GREATER THE VARIETY OF TYPE FACES USED, THE GREATER THE VALUE OF MATRIX CONTRAST SERVICE"

In display composition, with its larger assortment of type faces and sorts, the use of Matrix Contrast Colors will give you great savings in linecasting operation . . . a bonus that newspapers and job shops with a variety of type faces receive when adopting Matrix Contrast Service.

When the reference marks are treated in bright contrasting colors such as red, green, yellow, orange, or white, the clear-cut characters show any variation in colors immediately. The occurrence of wrong fonts is eliminated and pi mats are selected with assurance. With the squint taken out of his work, the operator delivers a greater quantity and a better quality of composition.

Take it from your old Uncle Mat...

not one but five persons are pleased when Matrix Contrast Service is installed . . . the operator, the machinist, the employer, the reader, and the advertiser.

Copyright 1953, Matrix Contrast Corporation

MATRIX CONTRAST SERVICE *MATRIX CONTRAST CORPORATION*

154 West 14th Street, New York 11, N. Y.
326 W. Madison Street, Chicago 6, Ill.
1105 Trenton Street, Los Angeles 15, Calif.

European Agents: Funditor, Ltd., 3 Woodbridge Street, Clerkenwell Green, London, E.C.1.

Gimmicks and Gadgets and Instruments

At the recent Cincinnati Craftsmen's convention there was a session devoted to *Gimmicks, Gadgets and Instruments.* The session was conducted entirely by Indianapolis (Ind.) Craftsmen. A tremendous amount of time was spent in preparing for the session which will be repeated before one of the Indianapolis Club meetings at an early date. A number of speakers explained the production helps each for a different department. Credit for developing all of the items discussed was not claimed. Wherever possible, credit for an idea was given by each speaker. *Printing Equipment Engineer* is not reporting in detail on all of the devices but we hope such as are reported will be helpful.

The panel consisted of the following executives, all from Indianapolis with the exception of now Craftsman President Amadeo R. Tommasini, manager of the University of California Press, Berkeley, who was presiding officer. Moderator was R. G. Sutphin, general superintendent, The Paper Package Co.; Supt. Glenn Pagett, Typographic Service, spoke on *Gadgets and Instruments for Typography;* Vice Pres. Roland Lambert, Service Engraving Co., spoke on *Lower Cost Color Engraving;* Foreman James Kane, Success Printing & Litho Co., spoke on *Gimmicks in the Offset Pressroom;* Letterpress-Offset Supervisor Ed. R. Daily, Eli Lilly & Co., discussed *Pressroom Gadgets and Instruments;* Printing Dept. Head Eural B. Byfield, Eli Lilly & Co., talked about *Safety Gimmicks* adopted in the Lilly plant; Supt. Jos. E. Bright, Advance Independent Electrotype Co., presented a summary after the speakers had finished with their illustrated addresses.

Fig. 1

Proof Press Conveyor

In the plant of Weimer Typesetting Co., Inc., in connection with Linotype book composition, a problem arose regarding the handling of assembled sets of proofs in quantity. A vertical chain conveyor (Fig. 1) mounted back of the Vandercook electric galley proof press was built by Machinist W. David Morton.

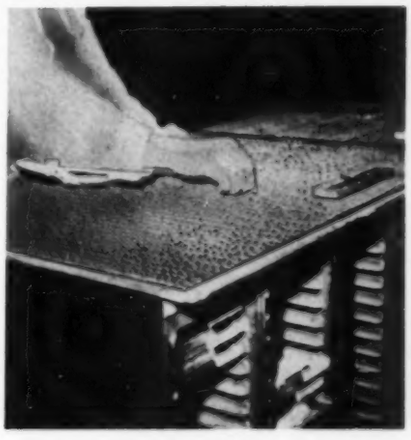


Fig. 2

With this equipment it is possible to pull from 1 to 20 sets of galley or page proofs, and when proofing is finished they are in numerical order ready for delivery to the customer. Before using this device, from 1 to 2 hours time of hand collating after proofing was finished, depending on size of book, was required. In use, the machine, automatically moves up one tray as the form is inked then the proof is pulled and put on the tray that is in front of the operator. The form is inked again and in doing this the tray with proof is moved up one position and second proof is pulled and placed in second tray and so on until the number of proofs are pulled that the job requires. The chain conveyor carries 20 trays. But if the job requires only 15 sets of proofs, a means is provided to trip the machine past five trays to the No. 1 tray; then it is ready to start on the second galley form with the proper tray in place.

Precision Galley Proofs

In the Typographic Service plant, a No. 219 Vandercook power-driven proof press is used to take precision proofs of Monotype composition while on the galley. The press bed is adjustable to 0.968 in. to allow for the 0.050 in. galley thickness, thus bringing the face of the composition to type high, 0.918 in. On this press the proofs are returned by the press to the operator at the feedboard. The type is locked in the galley during the proofing operation.

Precision Ad Form Proofing

In the case of an ad form con-

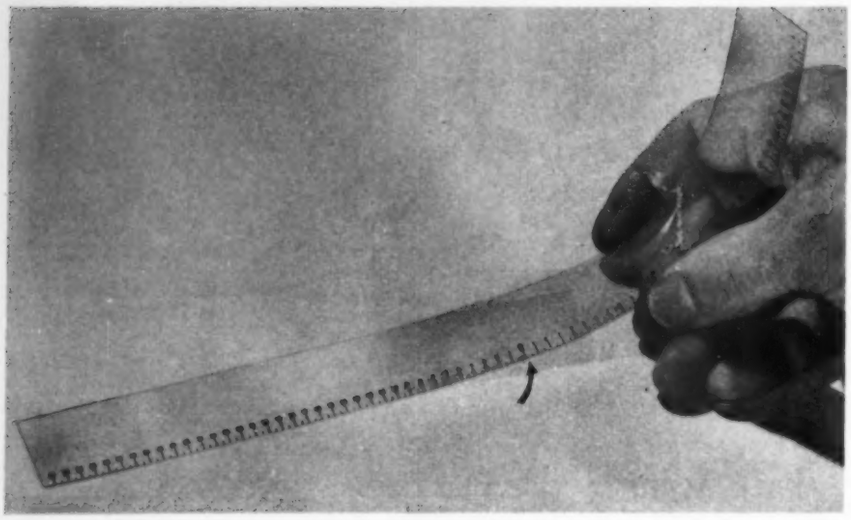


Fig. 3

taining photoengravings, and maybe rules, together with type, and it is necessary to furnish say 100 proofs of the form, the page is slid from the galley onto the bed of the No. 219 Vandercook proof press and is locked into position with bed bars. The bed of the press is adjusted to 0.918 in. printing height with the adjusting wheel. The frisket attachment is brought into action and an impression is pulled on the sheet form cutout. The sheet is fed to the grippers. After the impression has been made the proof is returned to the operator at the feedboard.

Removing Slug Feathers

In the Weimer Typesetting Co. plant, a special device (Fig. 2) is used to remove slight fins or feathers which may adhere to the bottom of linecast slugs. The Linotype operator dumps his machine galley of slugs on a perforated steel top. The galley boy, in one operation, moves the slugs forward and back over the perforated plate. The sharp edges of the holes act as trimmer knives to remove any fins from the bottom of the slugs. The steel plate is mounted on a galley storage cabinet. It is 3/16 in. thick and the holes are 3/16 in. diam. on 5/8 in. centers. The plate was fabricated by a machine shop and flattened by a sawmaker. The feathers or fins drop into the holes. When the holes are filled the plate is removed to clean out the small metal particles. A steel bar is fastened to one end of the storage cabinet to brace the long galley while both ends of the slugs are being scraped.

Checking Center Position of Display Lines

At Typographic Service, a transparent plastic scale (Fig. 3) was devised for use by the layout department or the proofreader to insure that heads in editorial composition, as well as display matter, are centered exactly. From time to time, this annoyance occurs and was noticed only after the job had been printed. It consists of a strip of transparent plastic 0.005 in. thick, by 1 in. by 12¼ in. Notice that the center line of the scale is

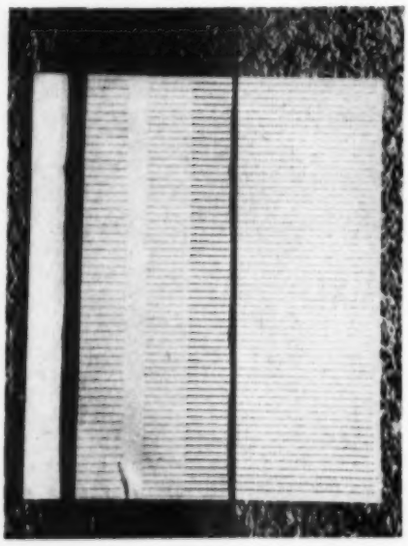


Fig. 4

marked 0 (zero). Extending at right and left and numbered consecutively, each graduation is one pica em. To use the scale, a pencil center line is drawn vertically through the proof. The zero is placed on the pencil line with the scale at right angle to the width of composition. Thus if the composition is 42 picas wide, the center line would be 21 picas. Looking through the scale, it is a simple matter to see if a display line is centered, say 15 picas from zero.

Accounting Machine Spacing Gauge

A problem occurring in plants producing forms for use in accounting machines, occurs in the slight variation of the printer's pica with the 1/16 in. line spacing used on the accounting machines. A device (credited to Shumate) consists of 0.005 in. thick piece of transparent plastic of sufficient length to cover the ruled section of the form being checked bears hair lines seven to the inch and 12 picas wide. In Fig. 4 such a rule is shown. The presswork was done with bearers at each side of the lines. These, of course, were inked and show on the plastic scale. The 12 pica width of the hairline rules plus 12¾ in. depth in the scale shown is sufficient to check a certain type of form. The form shown consists of hairlines and dash leader lines. In the picture the scale graduations appear in somewhat heavy form right next to the thin black bearer at right.

Cropping Illustrations

In the layout room of Typographic Service it is often necessary to work from art or photographs of varying sizes and proportions. To determine how to crop illustrations and what areas to use and the position of various key points, a Lacey-Luci camera is used. The camera consists of lenses with bellows and an adjustable copyboard which projects the image on glass. Two controls permit reductions to one-fourth size and enlargements up to four times can be projected. To use, the operator places the copy on the copyboard. The approximated enlargement or reduction is determined by adjusting the copyboard with two controls. A sheet of layout paper is placed over the glass. The effect is much like the projection of the

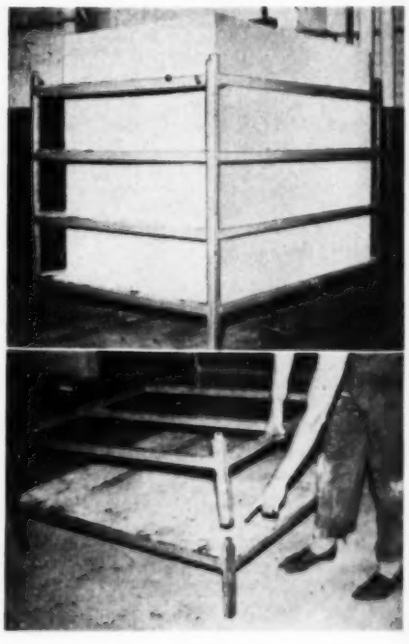


Fig. 5

image on ground glass. The camera can be used with protection from direct light through the use of a hood.

Saving Offset Pressroom Floor Space

Sectional skids used in the offset pressroom of the Success Printing & Litho Co., were described by Foreman James Kane. (See Fig. 5.) Kane explained that the idea is designed to save in his case 75% floor space and helps cut lost time due to frequent load changes when running enamels, Kromekote stock or high gloss inks where short loads are necessary to prevent offset or scuffing. The skids are made up according to press size. The framework preferably is square tubular aluminum for light weight in handling. The legs are made to a height to suit the press delivery, number of sheets preferred to run in a load and the number of skids to be racked at one time. The top of each leg is finished off in smaller square size than the inside wall of the tubing leg over which the top port of the tubing leg fits. This construction permits rigid support for the printed sheets. A piece of ¾ in. plywood, cut to skid size with notched corners holds the plywood in place. Kane was asked about lost time as the result of using the sectional skids. He replied: "Lost time is approx. 10% of the time required to lower the skid to the floor, remove the skid, replace it, and run it back up to jogging position."

Feed Roll Registering Mechanism

What he termed a "little wrinkle" was explained by Kane. The device, he said, permits precision timing and position on the feed roll registering mechanism. The segment gear which drives the upper feed rolls has been split and fitted with Allen head screws. The screws enable adjusting the split gear to take out all backlash or play between the two gears. The device permits firmer and more positive control of the upper feed rolls allowing the setting of the drive dog to split second timing on the throw, thereby providing a more positive position of the sheet as the lower feed rolls rise.

Help Press Operation

At the Success Printing & Litho Co., four 150 w. flood lamps (Fig. 6) have been mounted on a tubular conduit bar above the offset press feeder. The lamps eliminate static and also remove slight draws which occur at the tail end of the sheet. The lamps are fastened with clamps to permit moving crosswise of the sheet for best results. The lamps also may be moved forward and backward. Each lamp is individually wired to permit using from one to four as needed. A pressure switch may be installed so the lamps will operate only when the press is printing.

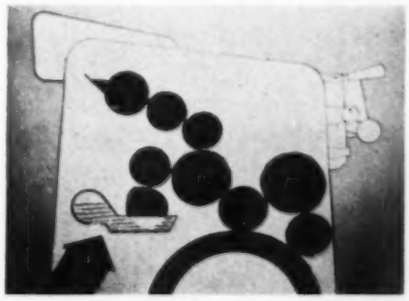


Fig. 8

Brushes Clean Grippers

Shown in Fig. 7 is a double brush arrangement used in the plant of the Success Printing & Litho Co. to keep the grippers free from spray dust. This accumulation causes sluggish action of the grippers and results in faulty sheet delivery. The component parts of the delivery bar cleaner are metal mounted upper and lower brushes made to fit the width of the press and a removable galvanized refuse pan mounted securely underneath the brushes. The brushes should be adjusted to obtain as close a sweep of the entire gripper shaft as possible. The brushes usually wear out in approx. one year but can be refilled at nominal cost.

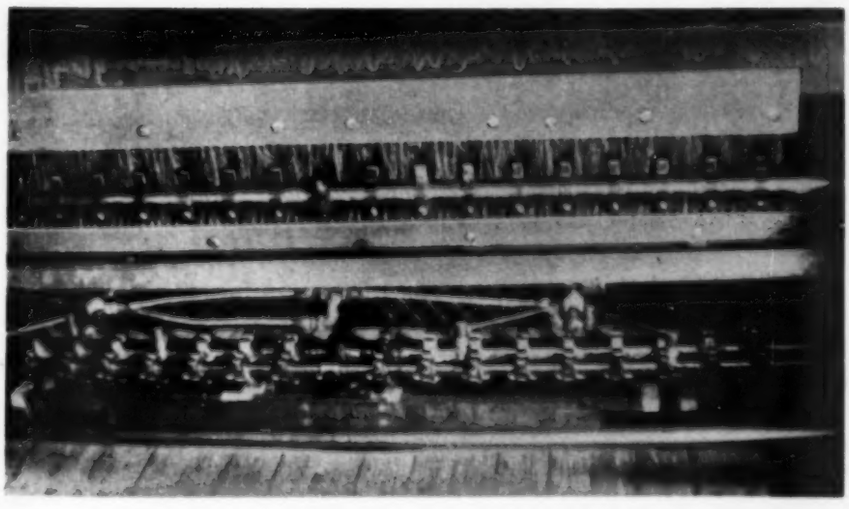


Fig. 7

Fig. 6

Utilizes Ink Rollers To Dampen Plate

Ed R. Daily, supervisor of letterpress and offset, Printing Dept., Eli Lilly & Co., discussed a number of production helps devised for use on offset presses. The first of these consisted of utilizing the ink rollers to dampen the plate as well as to distribute the ink to the plate. (See Fig. 8.) The cloth dampeners were removed. He explained his friends had informed him that utilizing the ink and water train could not be done. He said 11 presses are being operated at Lilly's on a tight production schedule printing three color labels satisfactorily. He asserted he does not have an ink and/or water problem. "Water does travel with the ink," he said, "but on the surface." The components of the system are a rubber roller, water pan, and a metal roller which completes the dampener assembly. In preparing the press, the rollers are inked before attaching the water pan. This is essential, because the rollers will not function as dampeners without a film of ink on the roller surface before water is added. Ink only covers the surface of the rollers. Water does not come into contact with the roller surface at any time while dampening the plate. Daily exhibited a printed sheet with sharp print, full color, no scum and no mottle. He also explained that the inked image has not been subjected to the rough surface of the cloth rollers. Another advantage is quick color change because there are no cloth dampeners to replace.

Good Housekeeping Gadget

One of the items mentioned by

Fig. 9

Daily was a small box (Fig. 9) which is designed to centralize location of chemicals and cleaning materials usually used at the offset press. The box can be made to suit the size of the materials to be contained in it.

Eight Cans of Ink

Daily explained that eight cans contain the entire base colors used in the Lilly plant for mixing colors. He said every difficult color submitted by the art department has been matched successfully. He explained that two of each color is provided to give control needed for quick and better matches. He also told of the 6000 colors matched in the Lilly plant during the past seven years. At times, work requiring five or six special colors go into the pressroom simultaneously. He related in some detail use of a series of color swatches for checking colors at the press. Other ideas presented were a pocket size pH meter for checking the water fountain, a scuff tester for testing ink and paper surfaces for scuff resistance, ink-water balance control device, and LTF Inkometer used in the Lilly plant.

Safety Controls

Eural B. Byfield, printing department head, Eli Lilly & Co., through the use of slides projected on a screen, discussed a number of worker safety methods, system and devices for protection against accidents. Proudly he said that from Jan. 1 to June 15 this year there were 86,024 man hours worked in the Lilly printing plant with no loss of productive hours due to disabling injuries. He attributed success to a continuing and aggressive safety program through cooperation with the National Safety Council. He explained the safety color code for plant building and equipment by means of a chart. All fire protection equipment danger areas are painted red. Safety and First Aid equipment carries a green color. Flammable liquid and hazardous material are carried in green colored containers. Dangerous machine parts and striking, stumbling or tripping hazards, as well as traffic signs are yellow. Yellow and black combination is used where extremely strong attention value is required. Radioactive materials are indicated by magenta color. White and black combination is used to define physical limits relating to plant housekeeping. Lilly activates a safety committee. Aside from the safety angle, the various color markings make a plant look more attractive. Byfield illustrated and described a two-handed safety control installed on all 44 in. cutters.

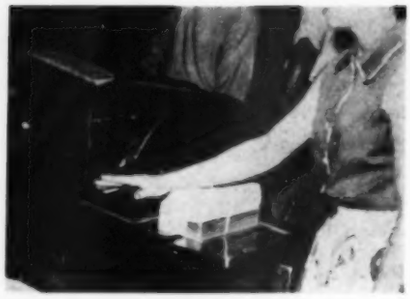
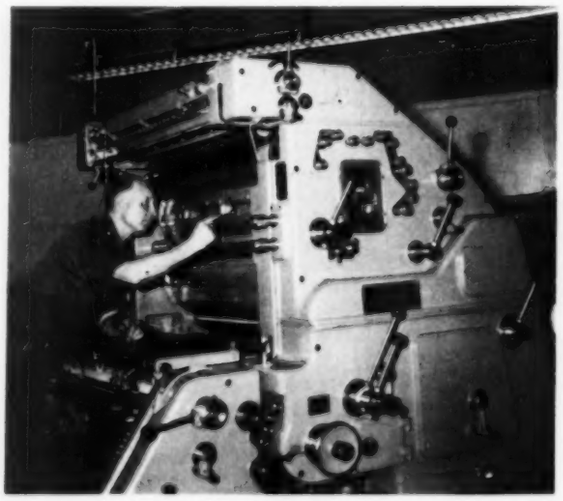


Fig. 10

Also, when an off-bearer helper is included in cutter operation, two bar guards have been installed to prevent the helper approaching too close to the operator while he (the operator) is operating the cutter. A guard over a crank arm on a Seybold cutter was shown. On the Christensen gang stitcher guards over moving belts for vacuum and pressure pumps have been installed. A guard was placed over the main drive of a Sheridan trimmer. A grilled guard, arched to fit with proper working space for the operator, was installed over a Bunn tying machine. (Fig. 10) The Bunn machine is used to tie mail and package insert bundles. A pipe guard rail was installed on the steps of a Miehle two color press to prevent possible falls. A metal mesh guard was installed over the transfer cylinder of a two color press to prevent injury in case a pressman were to fall into the press while it is being operated. All ventilating fans less than 6 ft. from the floor as well as all pedestal fans are guarded with mesh.

Unusual Bindery Storage Facilities—The new plant of Nicholstone Book Bindery, Nashville, Tenn., is equipped with several convenient storage areas afforded by racks suspended from steel roof beams. Racks are held rigid by steel rods bolted into the steel beam. The rack pictured holds book cloth for a job in process and is located directly above the cloth cutter or slitter and equally convenient to a casemaker seen here in operation. To the right is Charles Nichols, managing partner of the bindery. Similar storage racks in other parts of the building hold other book cloth, super cloth, pressboard, and the supply of plastic cones for spiral binding. Nicholstone Book Bindery is said to be the south's largest trade bindery.



George Blair, parts and service representative, Miehle Printing Press & Mfg. Co., in the Salt Lake City (Ut.) area, is shown getting experience and training on the new Miehle 38 Offset press. A service training and refresher course for all Miehle service personnel on all Miehle equipment has been instituted, says F. Irving Walsh, jr., products service manager. This coincides with the introduction of the new Miehle 38. In a further step illustrating the importance of service says Carlton Mellick, Miehle sales vice president, the repair order department has been made a function of the sales department. The repair order department is now coupled with the installation and service departments, both of which are headed by F. Irving Walsh, jr.

Maintenance and Repair of Composing Equipment

An innovation in program procedure occurred at the Friday, September 9 session of the Intl. Typographic Composition Assoc., which held its 1955 convention at Claridge Hotel, Atlantic City, N.J., on September 8, 9 and 10. Executive Director Frank M. Sherman arranged for six concurrent clinic sessions. A number of members of the Association, perhaps 16 to 20 each, were assigned to one of the group meetings, presided over by a moderator. As each half-hour clinic session was concluded, each group remained stationary, but the moderator moved on to another group. In this way, a different subject was presented to each group.

Subjects of the six clinics were related to (1) Equipment Maintenance and Repair, (2) Labor Relations, (3) Advertising and Publicity, (4) Duties of Contact Men and Salesmen, (5) Accounting Methods and Cost Determination, and (6) Pricing Services and Commodities.

Printing Equipment Engineer is reporting only upon the Equipment Maintenance and Repair Clinic which was presided over by Sol M. Cantor, president, The Composing Room, New York, N. Y., since the subject matter is of prime technical interest to our plant production and mechanical executive readers.

Moderator Cantor led off with the statement that under the conditions which typographic composition plants must operate, it is imperative that as perfect type matter as possible be produced for the customer. This statement was made with respect to letter alignment, type matter with as perfect face as possible, slugs trimmed square and true to body size and with respect to type high, carefully spaced both regarding word and line spacing.

For lineslug composition, machines should be maintained to correct warped molds, and spacebands and matrices should receive meticulous care.

Matrix Replacement Problem

It was brought out during the discussion that in many plants matrix replacement costs are entirely too great because of carelessness in handling matrices which results in damage to letter character sidewalls when matrices are permitted to remain on the floor after being dropped inadvertently during operation of the machine.

In one plant, the stray matrix problem is handled by the porter who comes early into the plant to clean up the floor. The porter carefully separates the matrices from the metal sweepings. He deposits them in one place on the machinist's bench. The first duty of the machinist is to inspect the matrices, see that they are repaired (if repairable), discard such matrices which have damaged sidewalls and immediately return the usable ones to the proper fonts in the magazines. In this plant there is trouble if the matrices are allowed to accumulate on the bench. Likewise, the operators are made conscious of the necessity for picking up stray matrices from the floor if readily accessible. All of this appears to be old-fashioned advice with which every operator or plant executive should be familiar. In the light of today's high cost of labor, replacement parts and the necessity for delivering a high quality product to the customer, care of equipment and careful workmanship are of utmost importance.

It was also brought out during the discussion that the side walls in some types of matrix faces are very thin, particularly those of the sans serif type. Hairlines between letter characters are easily produced if matrices are not handled carefully.

First Elevator Slide Safety Slot

On infrequent occasions, it is possible for some obstruction, such as a stray matrix or spaceband, to interfere with the stroke of the first elevator slide. This does not happen often but when a slide breaks in two due to careless operation or accidental interference with the normal movement of the slide, the break is an expensive one. The machine will be put out of operation until the slide can be replaced. A new slide and the time required to adjust it properly is a costly matter. It is not recommended that a slide be welded in such cases.

Moderator Cantor has devised what might be called a safety slot which is cut with a hacksaw into the first elevator slide upstroke adjusting screw slide stop, (part E-792 Linotype or part, U-821, Intertype). Its effect is that of a shearing pin. In case of obstruction with the stroke of the first elevator slide, the adjusting screw piece will break. Replacement of this piece is much lower in cost than slide replacement, of course. The slot is cut diagonally between the dowel pin and the adjusting screw hole with the hacksaw blade to a depth of approx. ¼ in. Being made of cast iron, the banking screw bracket will break in case of abnormal pressure.

A Help to Trimming Slugs Parallel

While not exactly a new idea, the precision grinding of shallow ribs (0.003 in. deep) in the constant side of the mold was suggested to assist in obtaining parallel slug trim. The ribs must be ground opposite the rib grooves in the cap. It was stated that the constant mold side ribs are helpful on slug bodies ranging from 6 pt, to 12 pt. including recessed molds. The rib grooves can be ground in new molds as well as existing molds by the machine manufacturers, Linotype Parts Co. and/or Rich & McLean.

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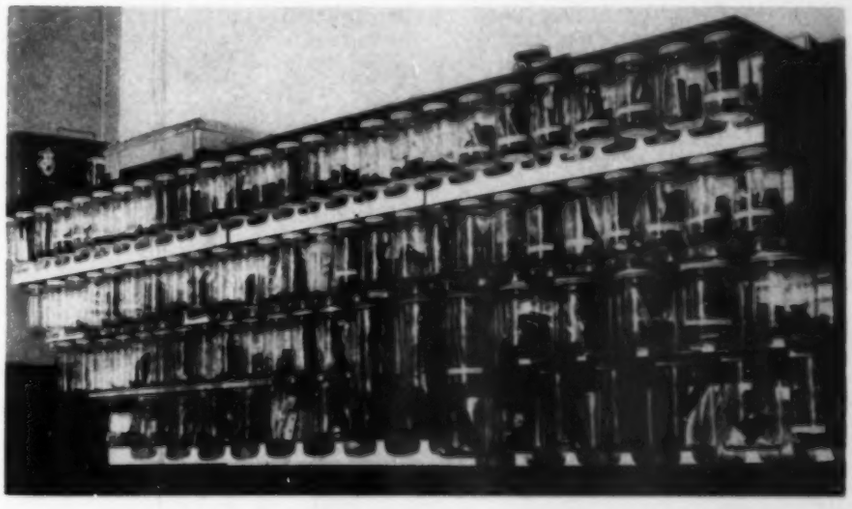


R. C. Brocious, mechanical superintendent of the Ft. Myers (Fla.) *News-Press*, constructed this parts cabinet for small Linotype and Intertype parts from discarded pickle-type glass jars and several lengths of ½ in. plywood. The jar lids are fastened to the under side of the plywood shelves. To get a part, a jar is unscrewed from the stationary lid. "It keeps parts free from dust and rust and besides it can be seen at a glance when new parts should be ordered," Brocious says.

ITCA Members Make Progress With Phototypesetting Methods

A phototypesetting clinic was held Thursday afternoon, Sept. 8 during the Atlantic City, N. J. convention of the Intl. Typographic Composition Assoc. Presiding Officer was W. E. Trevett of Cooper & Beatty, Ltd., Toronto, who is chairman of the ITCA Phototypography Section. He was assisted by a panel consisting of Ray Olsen, Modi-Graphic, Inc.; Bernard L. Halpern, Photomechanical Consultant, Swarthmore, Pa.; John M. Centa and Ted Mahoney, of E. I. du Pont de Nemours & Co., who answered film processing questions; Fotosetter Div. Manager Earl Gottschall, Intertype Corporation, who replied to questions regarding the Fotosetter; Robert D. Schulz, Graphic Reproduction Sales Div. of Eastman Kodak Co., who answered questions regarding cameras.

It became evident as the discussions took place that because of the newness of the process for combining typography with photomechanical methods most of the questions asked from the floor were related to fundamentals. It was also evident that there is a scarcity of competent technicians. The phototypographical section of the industry is undergoing growing pains.

Joseph K. Costello, Philadelphia, led off the session with a discussion of the progress phototypesetting is making in the Graphic Arts industry. The demand for phototypesetting is causing it to grow out of its adolescent period. Certain phases of the process have gained speed in production. The end product is a high contrast film image. As to the form the phototypesetting machine will take in the future, Costello said that it will be a lightweight machine fitted with a fine camera. The machine will compose automatically and sharp proofs will be furnished for letterpress production. At present, however, the phototypesetting industry must get rid of its growing pains.

Someone in the audience asked about the best way to handle a camera job. The first consideration is to determine how large the operation is. There is economy in plant operation if the plant is large enough to permit specialization among the craft. It is granted that the small plant cannot specialize its various operations, but ways and means for multiple handling of operations can be devised according to the skills of the operators.

Film or Paper?

When is it preferable to set type on film or on paper? A lot depends on the job itself—what film product the plate is to be made from. Certain phototypesetting plants are using photographic paper only. The determining factor in many cases is whether or not illustrations are to be pasted up with the type proofs. If paper is used, the problem of proofs arises. If film is used, the images can be taken direct on the proof.

Line and Halftone Shots

In pasting up combination line and halftone shots for newspaper work, the illustrations can be cut from a mat service book, the proofs for which are taken on enamel paper. These pasteups can be taken in right size with one shot for newspaper work. In commercial work, however, the process is more involved. The illustrations and the type must be brought down to the right size and screen and considerable more work is involved.

Letters Thicken

Someone wanted to know what makes letters thicken on photographic paper. The reply was that overexposure will cause it. Control of camera operation in this case is more critical. The latitude of orthochromatic film is wide. Typographers are interested only in securing sharp letter images. Eastman Resisto paper has been used long enough to indicate that it has eliminated difficulty in stretching.

Among the suggestions made by the panel as to what should be guarded against in handling film were: (1) Clean camera and lens; (2) Image spreading due to over exposure; (3) Temperature of solutions should be held to 68 deg. to 70 deg.; (4) Exposure time should be held from 2 min. to 3 min. If the temperature rises 5 deg., altered lines will result; (5) If thickness of film varies, lines will get out of focus; (6) Illumination should be uniform; (7) The film must be held flat.

What is the best method for making type enlargements on film? was asked from the floor. The reply was that a contact print is the sharpest. In getting the enlargement by projection, lens flare will occur. However, this can be held down to 1%.

It was stated that high contrast films and the corresponding chemicals must be used together for best results. Equipment must be clean; timers must be used in the cameras. Equipment and materials all down the line must be controlled. Developers change in quality through use, due to temperature and oxidation. (The darkroom technician should be checked up occasionally.) Manufacturer's directions should be followed rigidly. Some technicians try to change the directions but as a rule they are not successful. It is much safer to renew developer when partially exhausted rather than try to save a few cents for the new solution.

The question: *What increases opaquing time?* was asked. The reply was: Dirt and cigarette ashes cause pinholes. Again the necessity for maintaining clean equipment was stressed. An added cause was that developer weakened to the point of exhaustion will cause pinholes. In one case, the operator wore starched clothing. Slight overdevelopment in some cases tends to close pinholes. Someone made the remark that occasionally developers looked like iced tea or strong coffee.

The ideal qualifications for darkroom technicians were discussed. It

(*Continued on Page* 85)

The *Catholic Home Messenger* is now being printed at St. Paul's Monastery, Canfield, O., on two Pearl offset printing presses. Circulation of the *Home Messenger* is 100,000 copies monthly. The Pearl presses have a capacity of 18¼ in. by 24¾ in. with a pile height of over 48 in. Production speed is rated up to 8000 sheets per hr. A Nylon brush doctor is used in the inking mechanism to give full coverage.

Display Process-GAW Featured at ITCA Meet

One of the interesting items of information brought out at the Atlantic City convention, of the Intl. Typographic Assoc., Claridge Hotel, Sept. 7 to 10 inclusive, was that out of approx. 1000 commercial typesetting plants in the United States and Canada, there are about 75 doing phototypesetting work for customers. Of these, 80% are members of the ITCA. Not included among the 160 machines now in use are a number of newspaper plants which employ phototypesetting for magazine sections, display advertising and for gravure caption composition.

It appears, according to statements made by various officers of the association, that the past two years have been prosperous ones in the typographic compositon industry. A general note of optimism prevailed throughout the Atlantic City meeting with respect to continued prosperity for well managed plants.

Executive Secretary Frank M. Sherman stated that the ITCA now consists of 350 active member companies, not counting the approx. 35 associate member companies.

Transhado Transparency

Usually, at the annual ITCA conventions, announcements of new developments in the industry are made. At the Atlantic City meeting, the Dahl & Curry Co. exhibited many specimens of Transhado Transparencies. These are used for movie titles, company identification displays at convention exhibits, or for local display purposes. No heat is used in printing the type composition on transparent acetate film. The type is proved on a Vandercook proof press with a whitish base ink from foundry type; Intertype, Linotype, and/or Ludlow slugs, or direct from Monotype type or any combination. After the proofs have been taken on the acetate, they are dusted with a fine powder in whatever color desired. There are many colors of powders from which to choose. Letter shading effects are easily obtained by dusting a darker color powder over the top parts of the previously colored line, for instance, a brown over an orange color. It was explained that colors can be removed with carbon tetrachloride, preferably within 1 hr. after dusting. Most colors, with the exception of orange, can be removed up to a year later. It was also explained that the base ink solution can be printed on aluminum or gold foils successfully and dusted in the usual way. Paper stock is not receptive to the process. Company representative Muir stated that an average of 15 transparencies per hr. are produced in the Dahl & Curry plant.

Clinic Chairmen Report

On Saturday morning, Sept. 10, the various chairmen of the clinics held on Friday made their summation reports to the general assembly. Sol Cantor, president, The Composing Room, New York, N. Y., moderator of the Maintenance Clinic, reported. (See separate article in this issue.) Frank Lightbown, Cecil H. Wrightson, Inc., Boston, made his report on Advertising and Publicity. It was the consensus of the meeting that even though the industry may at present have all the work it can handle, advertising by individual plants should not be stopped. Moderator Clarence Harlowe, Harlowe Typography, Inc., Washington, D. C., reported that 80% of ITCA members use some type of time cost cards. In one composition plant not using mold liners in its slug machines it was figured out that 30% of the slugs cast in the machines (including all waste and corrected lines) went down the metal chute.

Guaranteed Annual Wage

Edmund J. Flynn, Director of Industrial Relations, Union Employers Section, Printing Industry of America, Inc., addressed the ITCA meeting on *The Guaranteed Annual Wage in the Graphic Arts Industry.* Flynn stated: "Available statistics from the Board of Governors of the Federal Reserve System support the basic premise of employment stability within the industry. These data show

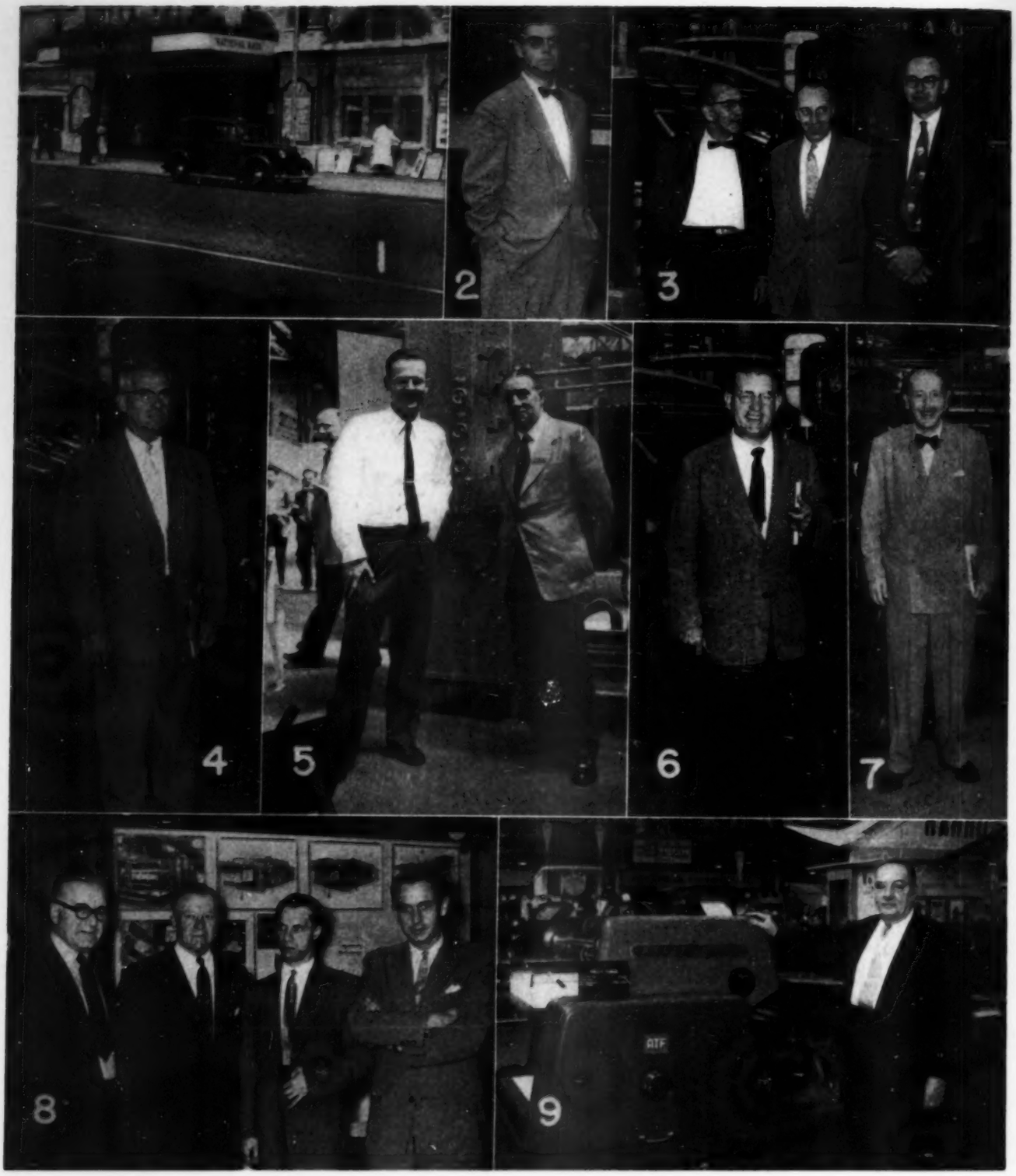
(*Continued on Page* 84)

W. E. (Bill) Switzer (left) has gone to work as assistant secretary to Frank M. Sherman, executive secretary, at Philadelphia headquarters of the Intl. Typographic Composition Assoc. He received his early training as a printer and Linotype operator in Webb City, Mo. In 1953 he received a Bachelor of Arts degree in Economics from American University in Washington, D. C. This year he completed a two year course in Printing Management at Carnegie Institute of Technology in Pittsburgh where he received a Bachelor of Science degree. Four years prior to enrollment at Carnegie Tech, he was employed by Hendricks-Miller, typographic service plant in Washington, D. C. He is married and has a son, Mike, aged 9, and a daughter, Lynn, 10 years of age. Switzer will devote most of his time to membership activities at ITCA headquarters in Philadelphia, and in planning and supervising operation of ITCA conferences and conventions.

Officers elected by the Intl. Typographic Composition Assoc. convention, Claridge Hotel, Atlantic City, N. J., Sept. 10, were (left to right): First Vice Pres., Jos. L. Baarlaer, Cincinnati (O.) Typesetting Co.; President, Harold R. Dantuma, Reliance Typesetting Co., Chicago.; Second Vice Pres., Frank Lightbown, Cecil H. Wrightson, Inc., Boston; Treasurer, John W. Shields, John W. Shields, Inc., Bridgeport, Conn.; Exec. Secy., Frank M. Sherman. *Regional Vice Presidents:* —Northeastern — Harry Slabin, General Composition Co., Boston; Mid-Atlantic—Don Canfield, Utica Typesetting Co., Utica, N. Y.; Mid-Western—Alfred Hoflund, Hoflund-Schmidt, Denver, Colo.; Southeastern—N. C. Jamison, Kelley-Jamison Co., Memphis, Tenn.; Southwestern—To be selected; Pacific Coast—Robert Willison, Typographic Service Co., Los Angeles; Canadian—Walter R. Adamson, Mono-Lino Typesetting Co., Toronto, Ontario, Canada.

Executive Committee (to serve for the three years)—Russell Utz, Typographic Service, Tulsa, Okla.; Max Baumwell, M. J. Baumwell Co., New York, N. Y.; Rodney Smith, Rochester Monotype Composition Co., Rochester, N. Y.; George A. Evans, Monotype Composition Co., Baltimore, Md.; William Braden, Thos. P. Henry Co., Detroit.; Clarence Harlowe, Harlowe Typography, Inc., Washington, D. C.

Ex-officio—Harold L. McGirr, Morris & Walsh Typesetting Co., New York, N. Y.



Americans Attend IPEX Show

The 10th International Printing Machinery and Allied Trades Exhibition was held in London from July 5 through July 16, first such exhibition since before World War II. Many American firms were among the 338 exhibitors who covered 430,000 sq. ft of floor space with their displays. Other countries represented at the show included Belgium, England, France, Germany, Italy, Netherlands, Sweden and Switzerland.

Pictured here are some of the Americans photographed at the show by Harold Gegenheimer, general manager, William Gegenheimer Co., Inc. So let's enter the Exposition Hall, London, England, as in Fig. 1. People shown in succeeding pictures (left to right) are: 2—George F. McKiernan, jr., Geo. F. McKiernan and Co., Chicago. 3—Roy P. Tyler, Installation and service manager; Franklin S. Barlow, service manager; and Howard Seel, chief development engineer, all of Harris-Seybold Co., Cleveland, O. 4—William Krueger, president, Krueger Lithographing Co., Milwaukee, Wis. 5—A. J. Powers, vice president engineering, Chemco Photoproducts Co., Glen Cove, N. Y.; and E. O. Corkett, director of pictorial machinery, under license for Chemco strip and roll film cameras in the British Empire. 6—Harry Brinkman, president, Cincinnati Lithographing Co., Cincinnati, O. 7—John H. Szel, foreign sales director in London for Russell Ernest Baum, Inc.; Miller Printing Machinery Co.; The Printing Machinery Co.; and Vandercook & Sons, Inc. 8—H. O. Wall, managing director, Miehle Printing Press & Mfg. Co., Ltd., London; J. E. Eddy, president, Miehle Printing Press & Mfg. Co., Chicago; H. C. Lohren, Miehle agent in Oslo, Norway; and T. Miggli, Miehle export manager. 9—Louis E. Pleninger, director of foreign operations for American Type Founders, Inc., Elizabeth, N. J.

The Difference Is In Objectives

Occasionally, some executives in the Graphic Arts still comment that the Technical Association of the Graphic Arts and the Research and Engineering Council ought to consolidate into one group. Consolidation of the two groups, at the moment, appears unlikely. Each serves a separate and distinct purpose in the industry.

Stated briefly, the TAGA group consists of individual members who conduct fundamental and/or applied research personally for some printing companies, for research institutes or for manufacturer and/or supplier companies.

The R&EC group consists largely of printing and supplier plant management executives whose dues generally are paid as company memberships. These management executives are interested in the results of research, coordinating research activities by others but not in conducting research itself.

Our friend, G. L. (Tiny) Erikson, explains it in another way. He said: "We'll assume that a TAGA member hears about a new dye. His first reaction is: 'I wonder if this dye has application in the Graphic Arts industry. What will we use it for?' He goes to work trying to devise ways and means of utilizing the dye in printing ink, perhaps in papermaking, or for textile purposes. If successful, and the subject is of enough importance, he'll make a report at the next TAGA annual meeting if the results of his work are not of a confidential nature."

TAGA members also present highly technical reports to their fellows at the annual meetings respecting progress in investigative work they do on existing printing plant problems, such as: *Printability, Objective Methods for Evaluating Sharpness in Litho Press Operation, Measurements of Ink Transfer in Printing Coated Papers, Use of LTF Inkometer in Printing Plants, Silk Screen Drying Techniques*, and many others.

TAGA also listens to papers by printing company, manufacturer and/or research institute researchers on such subjects as *Adaption of Electronic Color Correction to the Printing Process. A Three Color Black Printer, Fairchild Variable Response Unit for Electronic Engraving, Atomic Energy in the Graphic Arts, Light Sensitivity of Diazonium Compounds*, and others.

The largest part of the membership dues in the R&E Council usually are paid by the printing company. In turn, the company is privileged to send one or more of its executives to the annual meetings. In reality, the bulk of the company representatives is identified with management. Aims and objectives of the Council are (1) To coordinate Graphic Arts research and make reports regarding research activities partly as a matter of general information, and to avoid duplication of research activities; (2) To be the means of communication regarding development of new processes and methods between a sponsoring company and Council membership to let the latter know that a method or process is ready for actual production use in printing plants; (3) Another objective of the Council is to hear management reports regarding experience with new processes and/or methods; (4) To initiate engineering studies with submission of reports regarding plant problems.

At the May annual Council meeting in Boston, for instance, progress reports on some 22 research activities were made. Two management speakers described their experiences with the Eastman three color short run printing process and the use of the Photon phototypesetting machine in combination with the Dow Magnesium fast etching process in a daily newspaper plant. Manufacturing company executives spoke on paint and light in the printing plant. A most important engineering report on equipment user manual standardization and equipment preventive maintenance was presented.

Thus it can be seen that both TAGA and R&EC are coordinating groups. They serve useful and different purposes in the Graphic Arts industry. One group representing the scientists in the industry actually is engaged in research work, reports and discusses work on unknown applications of materials and methods for the Graphic Arts industry. The other group, representing management, coordinates and reports upon research activities and through plant management members lets the industry know about their pioneering experiences with new processes, as well as intensively pursuing industry-wide engineering studies for better plant operation.

The Graphic Arts industry needs both types of organization. By all means, identify yourself with the one which fits your particular plant operation. The majority of *Printing Equipment Engineer's* readers should be interested in having their companies become members of the Research and Engineering Council. The ultimate objective of this organization is to assist in reducing plant manufacturing costs.

Short-run Three-color Process Permits Less Costly Color Work

By HORACE ANNIS

Nearly two years after he first became interested in the Eastman three-color short-run offset printing process, Felton Colwell, president of The Colwell Press, Inc., Minneapolis, has in operation on a commercial basis, a separate plant utilizing that process.

The development, which came about through many hours of study, research, experimentation and many dollars spent by the Colwell organization in bringing the process from the pilot plant stage to volume production, has resulted in giving color printing in the Minneapolis area a shot in the arm. For while The Colwell Press does most of the presswork for the three-color process at present, the company also makes color separation and plates for others who wish to bring their presswork up to the rigid standards of control required in using the process.

Development of the process in the Colwell plant has made low cost color available to many plants and users of printing who previously could not afford it. Thus it gives the industry the ability to take advantage of the growing color consciousness of the public. At present the process is confined to 150-line neutral contact screen. Plates are presensitized zinc or aluminum.

The low cost of the proces is due to the comparative speed with which the separations are made and to the fact that there is no hand correction involved. As to the short-run feature, this low cost makes the process suitable for short runs where color previously was too costly, but, as a matter of fact, the plates can be run for several thousand impressions.

The Colwell Press venture was made possible, in large part, by

Supt. Al Raditz, The Colwell Press, Minneapolis, Minn., inspects sheet of a three-color process job executed by Eastman method as it comes from a Harris 17 in. by 22 in. offset press.

the cooperation it received from Eastman Kodak Co., the Eastman research laboratories and the company's Dr. Walter Clark. Eastman provided Jim Musson of The Colwell Press with information and blueprints necessary for Colwell's to set up its pilot plant. The Eastman laboratories phase of the development occupied about six years, so that the total development to commercial use in the Colwell plant was a matter of about eight years. The Colwell Press, through the combined efforts of Colwell, Musson, who is in charge of the new plant, and Al Radatz, Colwell production manager, is still carrying on studies to make the process even more successful.

When he set out to adapt the new process to commercial requirements, Colwell was fortunate in that he had within his organization Jim Musson who had previously spent two years at the Lithographic Technical Foundation laboratories and was presently in the Colwell Litho Products Co., a separate Colwell enterprise set up for the manufacture and marketing of lithographic equipment and products. He therefore had the start of the technical know-how which was so necessary. Other Colwell personnel, under Musson's direction, has been specially trained for this process.

From the foregoing it will be seen that much of The Colwell Press's success with the three-color process has been due to the fact that it had at its disposal the facilities of the rest of the Colwell organization which includes a trade composition plant, separate offset plant, letterpress plant and a color card division servicing the paint trade.

Now, as to just what goes into such a new development after the preliminary study of commercial possibilities and market has been completed:

To start with, there was considerable expense for equipment. This included at the beginning the camera for automatically making separations from 35 mm. Kodachrome, with electric control panel for automatic timing of exposure light and flashes, mask making equipment, platemaking facilities and a Multilith press, a special darkroom and much other equipment. The Multilith itself had to be worked over to get proper ink distribution and positive register. The Colwell Press built much of its own equipment.

From that start, the plant now has the original camera, which was limited to 3⅛-in. by 4½-in. prints, a new variable size camera which handles a much larger range of sizes suitable for the requirements of commercial printing of catalogs, folders, etc.; seven darkrooms, the original Multilith and a new 17 in. by 22 in. Harris offset press, more masking equipment and more personnel.

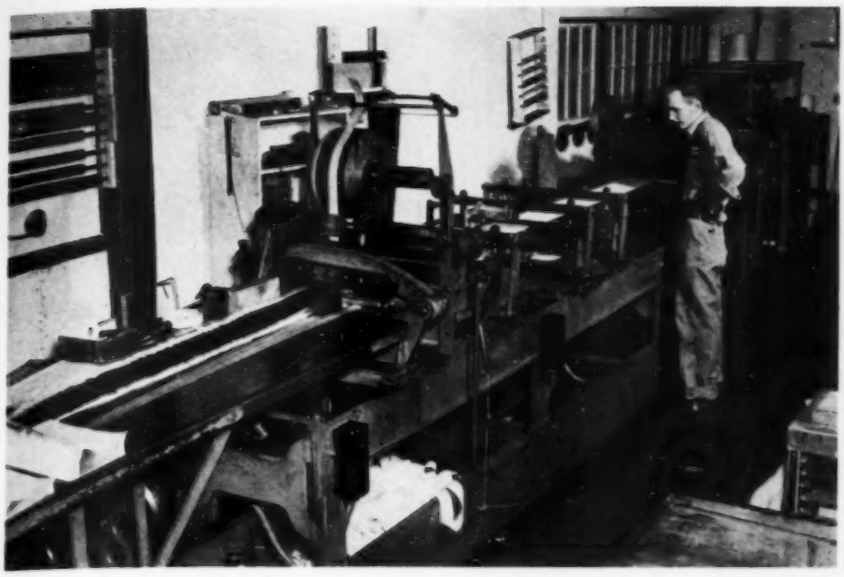
At this point it might be well to define that term "low cost" which has been associated with the process from the beginning. True, it is low cost for the users of color printing—so low that thousands of jobs are now being run in color which could not previously have been attempted because of the exorbitant expense in making the color separations. Let us say, for instance, that a customer with a limited, specialized sales field wishes to use color illustrations for a considerable number of items in a catalog which would be distributed to a few hundred customers. He couldn't afford to do that previously. Now he can. And he gets a good job of printing, not as good as a four-color job done by conventional methods and costing 10 times as much, but still a very pleasing product.

But Colwell has a word of caution about that "low cost" term. "It's not the cheapest thing in the world to install." He adds that in selling this work an idea has to be sold and along with the idea, the understanding that there must be considerable pre-planning so that the original art will be suitable for this facsimile reproduction. The job has to be thoroughly planned from start to finish.

Mr. Colwell emphasizes that successful operation of the process is dependent on volume production. This volume is now being realized in the Colwell plant as the excellence of the work, its economy and adaptability to a wide range of subjects is gaining recognition among printers and users of printing.

On this Multilith, operated by Vern Johnson, the Colwell Press staff (Minneapolis) worked out refinements of the Eastman three-color process to place it on a commercial basis. The Multilith press was worked over in the Colwell plant to bring about the rigid control standards required in printing to make the process a success. Adjustments included built in register pins and inking adjustments.

The A. H. Pugh Printing Co., Cincinnati, O., is expanding in both offset and letterpress. Pugh Printing has spent more than $150 thousand for new and improved equipment within the past several years, and recently installed this new Model LTV, one color, 17½ in. by 22½ in., Harris offset press. Pres. William H. Pugh (right) and Richard A. Navratil, Harris-Seybold's resident representative in Cincinnati, are examining a sheet off the delivery pile.



Automated Printing Plant Housed in Old Red Barn

The paper unrolled, and sped through the machine which printed, numbered, perforated, slotted, glued and attached carbon to it, transforming it in one hour into 6000 bill forms, printed on both sides, cut to size, ready for delivery. The machine on which the work was done is a Pearce Multi-converter, an automatic machine which can be made to do a number of operations besides printing.

The Multi-converter is housed in an old-fashioned red barn. Buzz Proudly, owner of Nu-Era Process Co., Brookpark Road in Cleveland, believes a small business can benefit by automation as well as big business.

"We are a small plant doing a diversified business," Proudly pointed out as he demonstrated the features of the machine on which he was running the 6000 bill forms.

The stock from the roll was unwinding uniformly, controlled by an electric eye. The 16 in. web, kept in proper tension by adjustable feed rollers, carried the paper through the first press where the face side of the bill form was numbered and printed. Then it flowed through the second in-line press for the printing of the reverse side of the bill.

Moving swiftly, the paper reached station No. 3, where a vertical unit slotted and perforated the forms. At the fourth station a rotary perforator left its mark. At the fifth, a strip of glue was added along the top edge of each bill and at station No. 6, a sheet of carbon paper was fed down, cut to size and affixed to each form. Now the forms were sliced apart with accuracy and the finished bill forms were delivered.

Proudly explained that "Running the same forms two-up on one of the standard presses would have taken 1 hr. for printing and perforating alone. Cutting the forms would have required an additional 15 min., 30 min. would have elapsed in punching and slotting, 15 min. to cut the carbon and we would have spent 4 hrs. in hand-gathering and edge-gluing the carbon to the bill form. Cutting the double forms apart would have required an additional 3½ hrs. What used to take several people 9½ hrs. can be done in 1 hr. with one operator."

"This particular bill form was a simple one," said Proudly, "and the machine can turn out 100,000 copies of a form consisting of 12 separate sheets, each a different color and each captioned differently, plus 11 glued carbons."

Specializing in the preparation of multiple office forms, Proudly refers to his shop as a one machine shop. In addition to his Pearce Multi-converter and Ludlow for typesetting, the barn houses a Miehle Vertical Press, a collator and a stitcher.

Instead of just "keeping the shop going" by taking on small jobs between large ones, Proudly has found that he can take small jobs profitably.

Press makeready time is cut considerably, he explained, by the gear shift on the Multi-converter. The gear shift changes the ratio between the printing units and the following stations. Other features include removable ink fountains for change of color and washup; and an arrangement whereby an idle printing unit can be disengaged and washed up for the next job while the current job is running.

There is enough impressional strength for large solid forms or the machine can produce excellent register on the thinnest labels. It prints from type, electros, or rubber plates, on one or both sides of the web in one or more colors.

In the printing business since 1931, ex-G. I. Proudly decided he was through with real small job printing when he was discharged from the army in 1951. He purchased the Multi-converter for $30 thousand and paid it off in 30 months. He estimates the machine can produce $75 an hour over labor and material and that it can handle a million dollars worth of work per year.

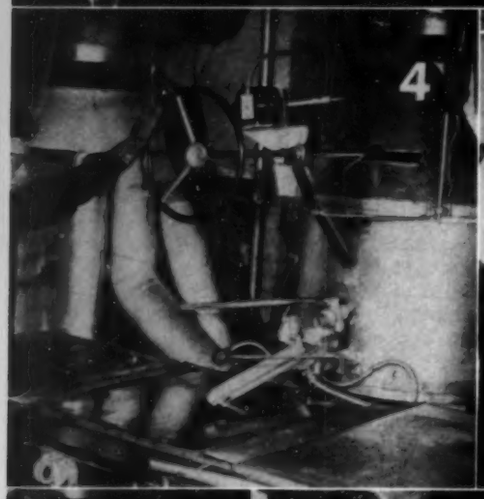
"The machine is simple to set up and get going. If you are changing from one similar job to another there is practically no downtime. Because each station has its own stops, the entire machine can be cut off at any point along the line," he explained. Proudly figures ½ hr. machine downtime between two totally different jobs. The machine is mounted on rails so that additional units can be installed at any time.

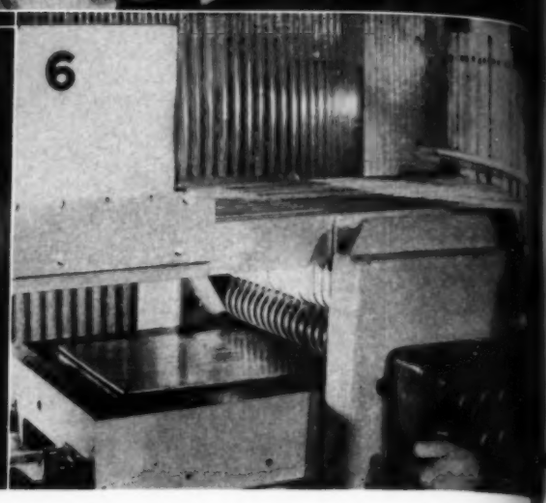
"This machine with four presses for example, instead of two, can be made to print up to four colors simultaneously on one side of the web or two colors on both sides. Additional stations for reinforcing, eyeletting and die cutting can be installed. The Multi-converter delivers up to 6250 i. p. h. and can print stock up to 12 in. by 14 in. size," he said.

Although Proudly uses the equipment primarily for office forms, he also executes labels, tags, tickets, match book covers, small folding boxes. It delivers in gangs, groups of 50 or rewound in rolls—the latter, of course, for tickets.

SWITCHES AGED IN CHEESE ROOM

Those noiseless mercury switches—like good cheese, must age before they are at their best. Sluggishness caused by moisture in the mercury tube will show up after manufacture if the switch has rested for 48 hrs., the Micro Switch Div. of Minneapolis-Honeywell found out. Micro inspectors in Freeport, Ill., looked around for a place to "age" their products undisturbed—like cheese. The logical answer: An old cheese aging room formerly used by a national dairy manufacturer.





Electrotypes 13 Ways Better Revealed by Association Survey

New methods and machines for making better electrotypes have been developed at the rate of almost one a year since 1940—the 100th anniversary of the first electrotype. By actual count, there are 13 reasons why the electrotyping industry has been able to deliver a better product and maintain a realistic price in the face of rising costs, according to a survey made by the Intl. Assoc. of Electrotypers & Stereotypers, Inc.

"Each improvement has added lustre to the inherent quality of letterpress printing," reports Carl N. Becker, president of IAES, "by bringing higher fidelity and greater speed to the letterpress printing industry."

"Objectives are duplicated in some of the improvements and others are applicable only to newspapers and magazines, but most of our association members are using improved and new methods for producing better electrotypes," Becker continued.

Here is the electrotyping industry's progress report for the last 15 years:

Rigid Vinyl Sheet Molding. A synthetic resin of the thermoplastic type, in the form of sheets 0.030 in., 0.035 in. and 0.040 in. thick, was introduced as a molding material in the early 1940's. (see Fig. 1) It was the result of research at Battelle Memorial Institute. Earlier experiments in Chicago with a rubber-wax composition backed with aluminum for cold molding had stimulated the introduction of silver spray. Hot and cold plastic molding sheets are widely used. Introduction of plastic sheets has given electrotypers another material to augment sheet lead molding, which consistently has produced high quality electrotypes since before World War I. Neither plastic nor sheet lead, however, have completely replaced wax —the first molding material.

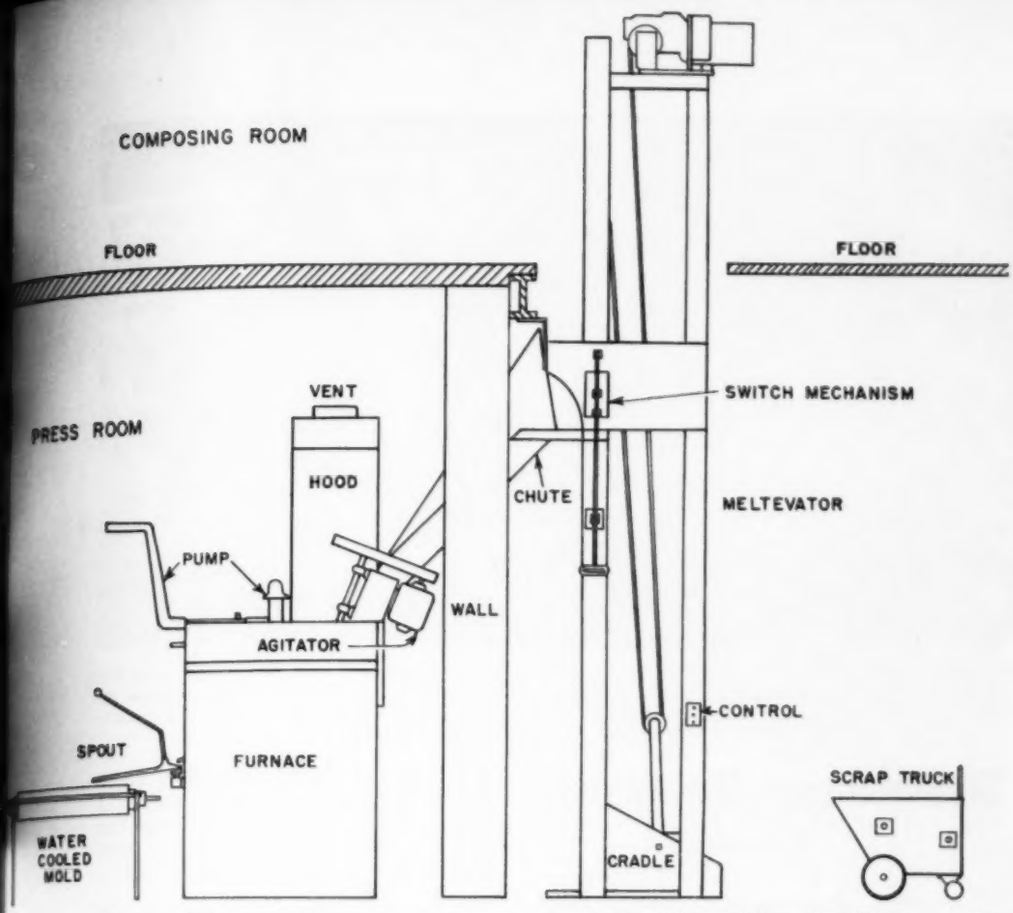
Silver Spray. The first commercial tests for silver spray, as the conductor replacement for graphite, were made in a Chicago plant in 1940. It is a method of applying silver to a mold surface (see Fig. 2) to create a conducting surface for the electrolytic deposition of copper, nickel or other metal. This silver coating is deposited chemically. Electrotypers report the following customer-reactions to the use of silver spray: It has cleaned up type forms by decreasing the use of graphite and it has improved service by reducing plating time. From a technical viewpoint, silver spray has provided a better electroconductive surface with resulting uniform thickness and density of electrotype shells.

Copper Fluoborate Plating. When introduced in 1952 by a New England electrotyper, copper fluoborate solution permitted the plating cycle of specific jobs to be completed in 70 min. (see Fig. 3) Users of this fast plating process report production of a uniform shell with high tensile strength and ductility.

Nickel Sulphamate Plating. Simultaneous with the success of fast copper plating, a nickel sulphamate solution was introduced. This solution also permits the fast production of hard, ductile nickeltypes. It produces a stress free deposit.

Shell Backing Machine. This temperature- controlled casting machine (Fig. 4) which is a refinement of the open pan casting method, recently was put into operation by several electrotypers. It employs neither pressure nor centrifugal action, but a system of uniform heating and uniform cooling

(*Continued on Page* 76)



Novel Metal Remelting Installation—This drawing shows details of the Nolan Meltevator and Remelter furnace installation at the *Tonawanda News*, North Tonawanda, N. Y. Dead type metal to be remelted is dumped from the forms into trucks in the composing room. When a truck is loaded, it is wheeled to the Meltevator in the composing room, lowered to the furnace charging chute and is automatically dumped into the Remelter. Pigs are cast in the basement. As needed, pigs are loaded onto the Meltevator from basement level and are lifted directly to the first floor composing room. Dead metal from the adjacent stereotype department also can be loaded into the Remelter directly from the basement floor.

Two-floor System Permits Efficient Type Remelting

The Tonawanda Publishing Corp., publishers of the *Tonawanda News* in North Tonawanda, N. Y., overcame a manpower and floor space limitation problem with the help of engineers of the Nolan Corporation. Briefly, it was accomplished through a specially-designed application of the Nolan Meltevator.

In a print shop it's not always easy to hold an employee on the furnace loading job. The *Tonawanda News* used the full time of an apprentice to charge the Remelter. It was difficult to keep a man at it for any length of time.

Besides the manpower problem, the paper also faced materials handling, space and structural problems. Like many other plants, the *News* plant is not new and floor space is at a premium.

This led to complications: All type metal pigs are used on the first floor; all metal to be remelted also comes from the first floor. But, the only space available for the Remelter was in the basement of the building. At the time plant revision was contemplated, a dumb waiter was used to transport dead metal from the first floor composing room to the furnace below. Finished pigs were returned to the first floor via the dumbwaiter. All type metal had to be handled several times by hand.

To solve this problem, the *Tonawanda News* installed a Meltevator coupled with a 3-T. Nolan Remelter. By installing a Meltevator to charge the pot, the time of a full-time employee was saved.

The Meltevator shaft was built to extend through the basement ceiling to the floor above so that dead metal could be loaded directly onto the Meltevator from above. In this way, pot loading can be done by one man.

The only location available for the Remelter in the basement placed the Meltevator shaft directly in front of a doorway in the composing room. To get around this, the Meltevator was mounted away from the Remelter and connected to it by a chute. Because of space problems, the installation had to be made with the Remelter on one side of a concrete wall and the Meltevator on the other. The 48 in. chute connecting the Meltevator and Remelter extends through the wall.

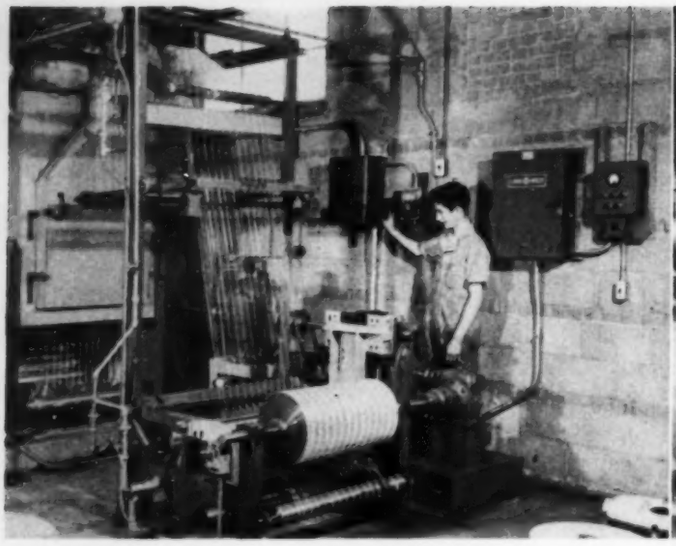
A water-cooled twin type ingot mold and an automatic agitator were added to complete the installation.

The specially-designed version of the Meltevator has eliminated the need for a full time man and has released him for other duties in the press-stereotype department. Space in the Tonawanda plant is fully utilized. The old dumb waiter has been eliminated.

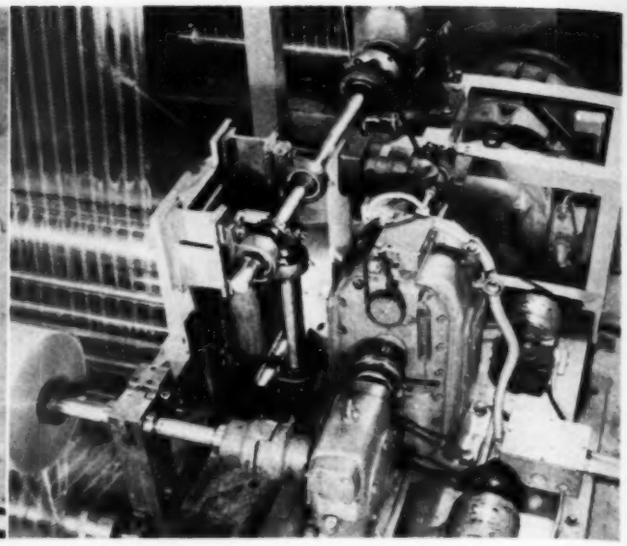
According to Mrs. Ruth Hewitt, publisher of the *Tonawanda News*, the Meltevator installation has solved the problem of keeping a man on the remelting job. Charging the Remelter is no longer a back-breaking chore. Since forms are broken up directly into a truck, metal never touches the floor. Because of this, the quality of the melt has improved. The paper now gets cleaner metal pigs, resulting in cleaner type.

Because all dead metal is loaded by machine, manual handling has been reduced greatly. Charging the metal pot formerly took from 15 to 30 min. The same job can now be done in less than 1 min.

Here the remelting man has brought a load of Margach pigs from the pig molds by means of a Nolan Undermold Pig Dolly to the Meltevator. He lifts the pigs from the dolly to the truck. Then he presses a switch button to raise the truck loaded with pigs to the composing room above from which point the pigs are distributed to the composing machines.



Wind-up and tension control at Johnsos-Coppock Co., press-room in Skokie, Ill. Unit in back controls tension between cylinder and drier rolls.



Electric controls give the operator finger tip control over the printing, drying and wind-up operation. Counterweights on the dancer roll are adjusted manually to suit the tensile strength of the sheet being printed.

Controls Relieve Destructive Tensions

Johnsos-Coppock Co., Skokie, Ill., prints, diverse types o wrappers used in automatic wrapping machines. Most of the output is printed cellophane, glassine, pliofilm, aluminum foil, and special kraft papers. These are used to wrap such products as caramels, bread, candy bars, crackers, bonbons, and household oil.

Most plastic films and metal foils are very delicate and must be handled carefully to avoid breaks. The emphasis throughout at Johnsos-Coppock is on quality printing; there should be no stretching or warping of the sheet as it is printed. This assures maximum efficiency when used in automatic wrapping machines.

To avoid the build-up of destructive tension in the sheet as it is being printed, provision was made to control the speed of the drier and wind-up rolls. This was accomplished with Link-Belt Co. P.I.V. variable speed drive control units.

Equipment Used

One of Johnsos-Coppock's presses is a two-color Champlain rotogravure press. It prints a continuous sheet 24 in. wide at 450 to 500 ft. per min. The print cylinders are driven by a 20 h.p. electric motor through a line shaft. This line shaft drives print cylinder and drier rolls through bevel gears.

After the sheet of material is printed it passes through a hot air chamber, around a counterweighted dancer roll, threads through a set of drier rolls and finally, is wound on a 5 in. diam. core roll.

Speed Control

A Link-Belt P.I.V. variable speed drive is interposed in the line shaft driving the drier rolls. The dancer roll provides constant tension and normally stays in one position. However, any change in speed between the press roll and the drier rolls causes the dancer roll to rise or fall.

A linkage between the dancer roll lever arm and a hydraulic control valve on the P.I.V. changes the speed of the drier rolls in relation to the press rolls. Counter weights on the lever arm permit papers and foils of different tensile strength to be printed.

The VGG2 P.I.V. variable speed unit range is 4 to 1 and with an input speed of 800 r.p.m. gives output speeds between 200 and 800 r.p.m.

The controls are arranged so that when the dancer roll falls and stores material the speed of the drier rolls is increased. Conversely, when the dancer roll rises beyond its normal position the speed of the drier rolls is decreased.

The P.I.V. control is operated through a power hydraulic system. Oil is circulated by a Vickers hydraulic pumping unit.

Wind-Up Control

The wind-up roll is also driven from the output shaft of the tension control P.I.V. A roller chain speed increaser drive transmits power to a Vickers magnetic particle clutch. The clutch is directly coupled to a P.I.V. variable speed control unit which is arranged to control the speed of the wind-up roll.

The speed range is 4 to 1, and the unit is direct-connected to a worm gear reducer with 3⅝ to 1 ratio. The connection between the output shaft of this reducer and the wind-up roll is made by a square jaw clutch.

Since input speed of the P.I.V. on this wind-up drive can be varied over a 4 to 1 range, a total variation of 16 to 1 is possible on the roll—or between about 51 and 816 r.p.m. These speeds are adequate to permit the roll to slow down from 385 r.p.m. at 5 in. diam. to 96 r.p.m. at 20-in. maximum diam. of wind-up roll at max. press speed of 500 ft. per min.

Control System

The input shaft of the magnetic particle clutch drives a General Electric tachometer generator. The output shaft of the clutch also drives a tachometer generator with matching voltage-speed curve. These generators are adjusted so that they generate equal voltage when there is 3 per cent slip through the clutch.

Any change in voltage actuates an electric motor operating the P.I.V. control screw to change the output speed. The speed is changed in the direction required to restore the 3% slip in the clutch.

As paper is wound on the roll, sheet tension tends to increase. The increased drag increases the slip in the magnetic particle clutch. This unbalances the voltage output of the generators and the control screw is operated to slow down the roll speed.

The amount of tension in the sheet at the windup is determined by a setting of the rheostat which controls the current to the field of the clutch. This eliminates the need for a second dancer roll device in contact with the traveling sheet.

Symbolic of the dominant steel industry in Lorain, O., the *Journal's* new building is landmarked with this triangular trussed steel tower which rises 60 ft. from the ground.

A New Publishing Plant —Lorain (O.) Journal

The new $1 million building and plant of the Lorain (O.) *Journal* (23,000 daily circulation) has been in operation since the early part of May. The new air conditioned plant extends frontage wise 192 ft. on Broadway at Elyria Ave. by 122 ft. from front to back for a total of 46,000 sq. ft. floor space. The total ground area is approx. 405 ft. frontage by 145 ft. depth. At each end of the building there is an asphalt paved parking space for automobiles—for customer use and for employees.

The two story building is of concrete and reinforced steel construction with mostly buff brick facing except for a designed section of the front which is finished in chocolate brown brick.

Tower is Landmark

A distinguishing feature of the building is a triangular open steel tower which rises above the main entrance marquee 60 ft. into the air. There is a 7 ft. diam. illuminated clock face on each side of the tower near the top. The word *Journal* appears above each clock in neon illuminated letters 39 in. high.

The building was designed by Weinberg and Teare, Cleveland architectural firm, and was constructed by T. J. Hume & Son, Lorain contractor. Supervision during erection, plant equipment layout and workflow in general are credited to Production Mgr. Ralph Robuck.

Approx. 148 people are employed at the *Journal*.

General pattern throughout the plant consists of white acoustical tile ceilings with side walls paneled in white mahogany and mechanical departments with glazed tile in pastel color. Lighting throughout the building consists of continuous strip-drop fluorescent ceiling fixtures which emit maximum amount of foot candles according to the seeing task of the workers in the different departments.

Flooring

Floors in the business, editorial, advertising and circulation departments are asphalt tile block. In the main mechanical departments floors are of up-grain wood block, pressroom is floored with "All-grip" steel. In the mail room and paper storage area the flooring is cement.

Air Conditioning

Air conditioning is provided in all departments with the exception of the pressroom which, however, is force ventilated and kept at temperature which will permit operating the presses efficiently.

One of the interesting items in connection with air conditioning the composing and stereotype departments is a baffle extending downwardly 6 ft. from the ceiling to permit free access between departments. The baffle is of metal lath and acoustical plaster construction 6 in. thick and extends the full length of the room. Running parallel with the baffle on the stereotype side and mounted close to the ceiling is an air duct through which the warm air from the stereotype department is drawn

PART NO. V-491	LOCATED: A-5	MINIMUM 1
PART NAME: Dist. Box Bar, 30 em, assem.		MAXIMUM 3
SUPPLIERS NAME	ADDRESS	

ORDERED		UNIT		RECEIVED		USED			INVENTORY	
DATE	QUAN	PRICE		DATE	QUAN	DATE	MACH. NO.	QUAN	DATE	QUAN
1-20-53	3	23	50	1-29-53					1-29-53	3
						2-10-53	10	1	2-10-53	2

Composing Room Machine Parts Control System—In the composing room of the Lorain (O.) *Journal*, Production Mgr. Ralph Robuck has developed a card filing system by means of which the machinist can tell instantly whether or not a sufficient supply of parts for machines is at hand at all times to enable repair of any machine quickly. In fact, whether or not any replacement part is or is not in short supply is indicated at the time a new part is taken from the parts cabinet. The card system is employed for keeping track of all machinery related to composing room use. Parts are kept on hand at all times in sufficient quantity for Intertype and Linotype machines, TTS equipment, Ludlow and Elrod, Monotype Material Maker, C. & G. and Hammond Saw-trimmers, Mohr Saws, Metal Feeders, Motors, and Cline equipment. By means of the system, it is an easy matter to keep a running inventory of all parts. Robuck states there is approx. $5 thousand worth of parts kept on hand for replacement and/or repair purposes.

Shown in miniature form is one of the 5 in. by 7 in. printed and ruled cards upon which the machinist keeps his record. All of the cards are kept in a steel filing case resting on the machinist's desk (*35* in the floor plan diagram). Just back of this desk is a steel cabinet *(36)* containing compartmented sections to permit maximum storage of each kind of part. There are 48 drawers in the cabinet which measures 24½ in. wide by 18 in. deep by 58 in. high. The front of each drawer carries a label with number corresponding to the numbers carried on the yellow file cards.

To explain how the cards are filled out and how parts records are kept, we will assume that a 30 em distributor box bar for one of the machines needs replacement. The machinist first hunts up the name of the part together with the part number in the machine manufacturer's illustrated catalog. In this case, the part number is V-491. The card also carries the number of the drawer in which the replacement part can be found. In this instance, the drawer is the one marked A-5. The machinist gets the bar and repairs the distributor box.

To explain the bookkeeping on the card (which applies in the same manner to all of the cards), it is indicated that a maximum of three bars are to be carried in stock. When the minimum of one bar has been reached, the machinist orders two new bars immediately.

Referring to column No. 1, three bars were ordered on Jan. 20, 1953 from the supplier at a unit price of $23.50 each. The three new bars were received on Jan. 29, 1953 and were placed in stock on Jan. 29, 1953 as indicated in the inventory columns at the right side of the card.

On Feb. 10, 1953, one bar was used for replacement on Machine No. 10. Again in the inventory columns, note is made of the quantity (2) left in stock on Feb. 10, 1953.

No matter what parts may be used by the machinist during the run, the record keeping is attended to immediately.

Robuck states that when an excessive number of parts are used frequently on any one machine he is able to tell whether or not the machine is in need of a general overhauling or if it should be replaced with a new machine.

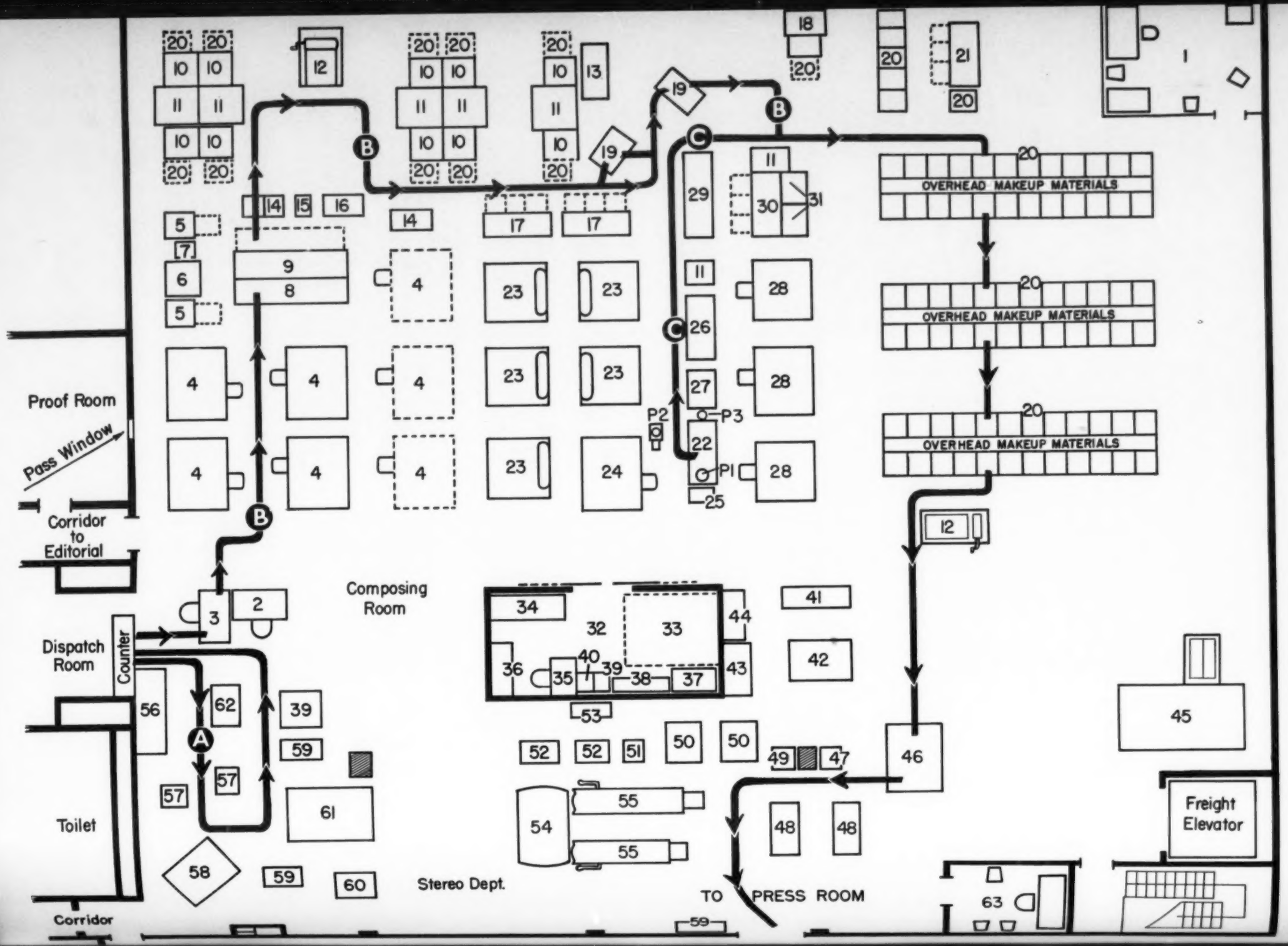
The exception to the procedure outlined above is that if the defective distributor bar is repairable by the machinist within a few days in his own shop, or may be shipped out for repair, the bookkeeping on the card indicates the fact.

Key to Equipment Layout and Workflow at Lorain (O.) *Journal*

1. Production Manager's Office
2. Composing Room Superintendent's Desk
3. Ad Foreman's Desk
4. Ad Machines
5. Ludlow Mat Cabinet
6. Ludlow Caster
7. Ludlow Supersurfacer
8. Ad-machine Dump
9. Hold and Pickup Ad Storage
10. Ad Banks (back-to-back)
11. Hammond and Morrison Saw Trimmers
12. Vandercook Page Proof Press
13. Rouse Band Saw
14. Rouse Vertical Mitering Machine
15. Morrison Slug Stripper
16. Bulk Lead, Slug, Base Storage
17. Uncorrected Ad Storage (45 letterboards)
18. Hamilton Electric Page Storage Cabinet
19. Mobile Ad Transfer Trucks (corrected ads)
20. Page Trucks
21. Classified Makeup and Storage (43 letterboards)
22. Teletype Tape Receiving Station
    - P1 TTS News tape from editorial offices
    - P2 Proofs to and from editorial offices
    - P3 Proofs to and from proof room
23. News Machines (Teletypesetter Units)
24. Headletter Machine
25. Magazine Rack (Headletter)
26. News Dump
27. Vandercook Proof Press (News)
28. News Ring and Correction Machines
29. News Correction Dump
30. Editorial Art Makeup and News Storage
31. News Galley Storage Cabinets
32. Machinist's Room (Wire Mesh Enclosure)
33. Area for Reconditioning and/or Erecting News Machine
34. Bench
35. Desk
36. Matrix and Parts Storage
37. Parts Cleaning Vat
38. Lathe
39. Grinder
40. Drill Press
41. Elrod Strip Caster
42. Monotype Material Maker
43. Bulk Storage of Strip Material
44. Bench
45. United American Dumperin Remelting Furnace
    - Stereo Dept.
46. Stereotype Mat Roller
47. First Trim Stereo Mat Shear
48. Convey-All Corp. Mat Packing Tables
49. Evencay Mat Pre-Shrinker
50. Sta-Hi Master Formers
51. Sta-Hi Mat Final Trim
52. Mat Storage Heaters
53. Pony Autoplate Vacuum Pump
54. 7 T. Kemp Stereo Metal Pot
55. Wood Pony Autoplate Flat Cast Stereo
56. Flat Cast Pasteup Table
57. Flat Scorchers
58. Hammond Easy Kaster
59. Tables
60. Saws
61. Hammond Shaver
62. Hammond Router
63. Pressroom Foreman's Office

off. Freshly cooled air is recirculated independently by air blower equipment.

The 80 T. Carrier air conditioning equipment is located in a pent house above the production departments. Thermostats are provided in each department to permit maintaining temperature and humidity according to the needs of the people in the department. Winter heating is supplied by gas boiler and hot water heat distribution system with oil standby equipment for


Proof Room
Pass Window
Corridor to Editorial
Dispatch Room
Counter
Toilet
Corridor
Composing Room
Stereo Dept.
OVERHEAD MAKEUP MATERIALS
OVERHEAD MAKEUP MATERIALS
OVERHEAD MAKEUP MATERIALS
TO PRESS ROOM
Freight Elevator
P1
P2
P3
A
B
C

Interesting Equipment Features in Plant of Lorain (O.) *Journal*

1.—Margach Pig Rack—In the composing room of the Lorain (O). *Journal* floor racks for holding feeder pigs are used. In many plants, the pigs are hung affixed to the mold gear arm of the linecomposing machine. However, late models of machines carry the metal pot control box on the mold gear arm. Thus, another means for storing pigs had to be devised. Where floor space is available, this rack is a desirable utility. As will be seen in the illustration, the rack holds twelve 24 lb. pigs for a total of 288 lbs. of metal. The material of the holder is ¼-in. steel plate, 10 in. wide and 12 in. deep by 28¼ in. high. The standard is inclined at an angle of 15 deg. There is a brace in the back to support the standard. Three ¾ in. round pegs each 7 in. long are used to hang the pigs.

2.—One of the specially designed pieces of equipment in the plant of the Lorain (O.) *Journal* are the two stereotype mat packing tables. These steel tables were made by Convey-All Corporation, Mansfield, O. Each table is shaped something like a capital letter T. The top is 54 in. wide by 3 ft. deep by 37 in. from floor to top of working surface. The base or pedestal is 47 in. wide by 15 in. deep. The smaller dimension base permits the stereotyper to stand close to the table top. Each end of the base is compartmented and a swinging door permits access to supplies stored inside. As will be seen, the center of the table top is provided with depressed partitions to separate the various widths of pre-cut packing strips and a moistener.

3.—A simplified solution for transporting page stereotype plates from stereotype to pressroom and return at the Lorain (O.) *Journal* is the plate truck shown here. It would not have been practical in this instance to attempt installation of a floor plate conveyor between stereotype and pressroom. The stereotype and pressrooms are adjacent to each other on the same floor level with a wall between to permit maintenance of air conditioning in the stereotype room and proper operating temperature in the pressroom. The truck shown here (one of two) is constructed of stout angle iron with welded connections. The surfaces on which the plates rest are hard wood to prevent injury to the plates. Capacity of each truck in nine full page plates. Each truck is 5 ft. long by 2 ft. deep with 32 in. high back framework. Two swingable hinged shelves (each holding three plates) are counterbalanced with coil springs and turnbuckle tension adjustment. In the illustration a load of plates is being returned to the stereotype room. Ball bearing rubber tired casters permit easy mobility. In the upper part of the illustration is shown an empty truck with shelves raised to permit loading the bottom of the truck with three plates.

4.—One of the interesting items in the new plant of the Lorain (O.) *Journal* is that the faces of all steel lockers in the dressing rooms are set flush with the wall. This contributes to good housekeeping and simplifies cleaning up operations. The problem of temporary storage on top the lockers for lunches, shoes and balled-up overalls is automatically eliminated. In some plants, even where the locker tops have been made with a 45 deg. angle, employees find a way of circumventing rules against "storing" materials on top the lockers. The flush wall locker is a simple and effective solution of a bothersome housekeeping problem.

5.—Built right into the new plant of the Lorain (O.) *Journal* is a 4644 sq. ft storage space for a 500 T. supply of newsprint rolls. The paper storage area is heated under automatically controlled conditions by Modine space heater units. Proper humidification is also provided. The receiving section of the newsprint storage room opens through a wide steel slat door right next to a B. & O. railroad spur. An hydraulic platform elevator in the newsprint storage room is of the same height as the sill of the railroad car in which the rolls are shipped. When the steel slat door has been raised, there is a magnesium dock board which can be raised or lowered to bridge the gap between car and receiving platform. A Towmotor truck with rotatable clamp is used to transport rolls from car to storage. The truck operator can remove a number of rolls from the car and set them on the platform at either side of the hydraulic lift. He then raises and lowers the Joyce-Cridland hydraulic lift platform, carrying the truck with clamped roll, to the floor of the storage level. The truck operator governs movement of the hydraulic lift with a pendulum switch as shown in the illustration.

Fig. 6—Running centrally through the mailroom is a rolling conveyor on which the wrappers for the bundles are placed. Two in-built Gerrard wire tying machines place the wire around the bundles, after which the bundles travel along the conveyor through a cut-in door. As will be seen in this illustration, the bundles now move along on a skatewheel conveyor to a waiting truck at the loading dock. The bundles may be sent in different directions to the trucks by means of three spurs. This is accomplished by moving a lever (not visible in this picture) at right or left of the exterior conveyor switch section so that the wheels will direct the bundle straight ahead or deflect it right or left. Movement of the lever changes the position of the free turning skatewheels of the switch section to accomplish direction.

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emergency use in the two furnaces.

Ink Supply

A 2700 gal. rectangular news ink storage tank with pumping equipment is installed in an accessible insulated pit below the reel room level at corner of the building. A Bowser, Inc. gauge is mounted on the reel room wall above the tank.

Press Controls

Controls for the eight unit Hoe press are located in a glass enclosed air conditioned room at the inner end of the pressroom. The control system was supplied by Cline Electric Mfg. Co.

Room for Growth

The floor area of the composing room and the stereotype department is 100 ft. by 88 ft. The pressroom floor area is 30 ft. by 90 ft., with 5 ft. floor space on each side of the two folders and eight units of Hoe presses. This represents an expansion of 30% over the floor space available in the *Journal's* former mechanical quarters.

A study of the composing and stereotype departments shown in the accompanying floor plan diagram will reveal that plenty of room has been provided for future equipment expansion. At the moment, there is not so much space between the various machines so as to cause excessive loss of time in workflow. Spacing between production islands was carefully studied to avoid excessive distance between any two operations, yet sufficient to permit freedom of worker movement.

Note the 8 ft. wide aisle extending between composing and stereotype departments throughout the length of the room.

Aisle spacing between the line composing machines is variable. In the operator's aisle between the ad machines there is a space of 6 ft. Since there are no operators employed at the keyboards of the TTS machines 16, (which operate at 10 lines per min.) the aisle space has been reduced to 3 ft. Between the TTS machines 16, the headletter machine 17, and the copy receiving and dump row, 20, 21, and 22, the aisle space is 4 ft. wide.

Major Workflow Paths

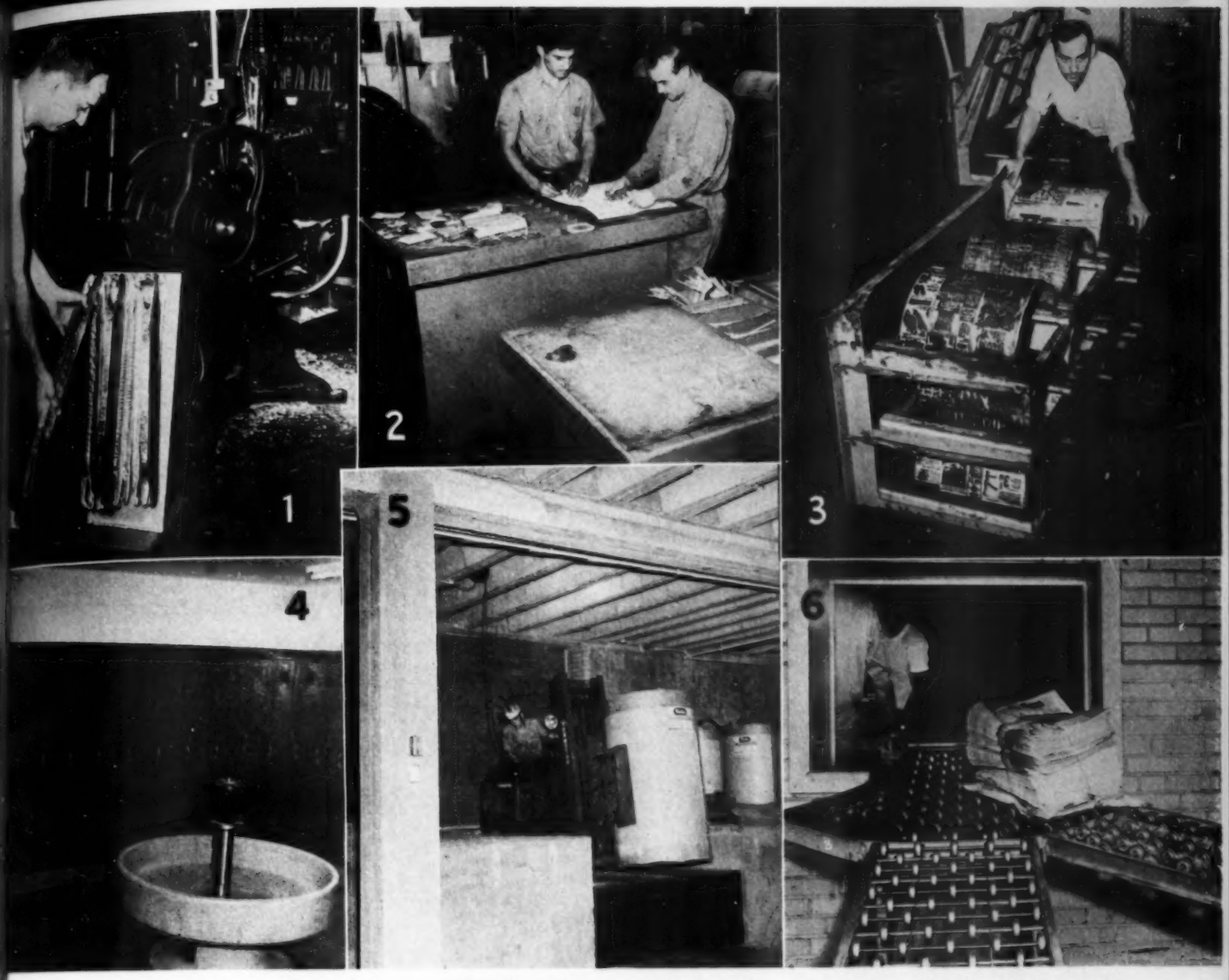
In the accompanying diagram, it will be noted that all ad copy comes into the composing room from the dispatch department. Workflow line *A* indicates that all mats, cuts and flatcasts are sent to the flatcast department. After casts have been made, they, together with the original material are returned to the dispatch room. All ad copy together with the casts is then sent to the composing room ad foreman at 3.

Advertising Workflow

Workflow line *B* indicates progress of copy through the ad room. At 2 a saw-trimmer has been provided for each two ad compositors at 1 and 1.

After ads have been proofed, they are taken to the uncorrected ad storage cabinets 17 in which there are 45 letterboards.

After the ads have been cor-



(*Continued from Page* 58)

rected, the next operation is to transfer them to the makeup department by mobile ad transfer trucks 19 and 19.

Workflow line *C*, of course, joins workflow line *B* so that both ad and editorial composition end up at a common point at the page form trucks 20 in the makeup department.

Workflow line *C* originates at Teletype tape receiving station 22. All editorial straightmatter including financial, classified and sports is received at this station in tape form from the editorial department. A group of three pneumatic tubes connects editorial, proof and the editorial composing departments. At P1 is the tube which brings the tape from the perforating room. At P2 is the pneumatic tube station which is used to transmit copy for heads, leads and art to and from the editorial offices. At P3 is the station through which proofs are sent to and received from the proof room. An interesting arrangement for a plant of this size is that of the three news ring and correction machines 28. As will be seen, all corrected news matter is taken from news correction dump 29.

Automatic Casing-In of Memorandum Books

(By M. S. KANTROWITZ, Chairman, Research Committee, Washington (D. C.) Club of Printing House Craftsmen, Inc.)

Studies by the Government Printing Office led to the design and construction of an automatic device suitable for very rapid casing-in of small size memorandum books of both side and end opening styles. A suitable paste adhesive and method for rapid pressing of the books were developed in conjunction with the operation of the machine.

The machine is composed of a feeder which automatically moves the cases in a flat position onto a chain conveyor where they pass along under a pasting roller which applies a thin coating of paste to the inside of the case, covering the exact area to which the end sheets are later to be pressed. The pasted case is conveyed to the next station on the machine where the book is fed from a hopper onto one side of the case below, then the case and book are conveyed to the next station where the free side of the case is turned over onto the top side of the book. The completely cased book now moves under a set of pressure rollers where it is given a squeeze, and finally onto another conveyor belt where pressure is maintained until the book is released at the end of the conveyor, a completely cased-in book.

Memorandum books, 3¾ in. wide, 6 in. long, and $\frac{1}{8}$ in. thick, have been made on this machine with an average production of approximately 1700 books per hr.

The adhesive found to perform best for this operation was a glucose glycol flour paste having the following formula:

	Percent
Water (added at the start)	35.0
Diethylene glycol	10.0
Beta Naphthol	.1
Ammonium Alum	.3
Glucose (43 degrees Baume' corn sirup)	20.0
Flour (soft winter wheat)	19.6
Water (from condensation of steam)	15.0
Total	100.0

The equipment used for rapid pressing of the books as they are delivered from the conveyor belt consists of two pneumatic type bundling presses which alternately press the books in bundles of 50 as they come from the casing-in machine. Patent rights for this machine have been applied for.

An Analysis of Education In Graphic Arts Industry

By CHRISTIAN E. BURCKEL*

**Consultant to the Graphic Arts Industry, Yonkers, N. Y.*

As long as everyone using a word with exactly the same meaning (or describes the same concept) there is little need to define the terms.

In casual conversation a dog is referred to as "man's best friend", and no one rushes to the dictionary to learn the meaning of the word. But between dog fanciers the discussion starts only after the word "dog" has been defined —and so it is in any specialized field.

When we start to organize a program of Education for future workers in the Graphic Arts industry, the discussion must begin with a definition of the terms: Graphic Arts, Graphic Arts Industry and Education.

The Graphic Arts are usually concerned with *recording* an idea or a concept for the purpose of transmitting that idea or concept to another.

Although this includes sculpturing, the tying of knots in strings, and the carving of words or hieroglyphics in stone, the contemporary concept limits itself to "those fine arts such as illustrating (including photography), painting and writing which pertain to representation on a flat surface."

The Graphic Arts industry is made up of three distinct phases of "representing" ideas or concepts on a flat surface for the purpose of transmitting these ideas or concepts to others: (1) Production, (2) Reproduction, and (3) Preservation.

The term Production as used in the Graphic Arts industry concerns itself with the preparation of one copy of an idea or concept. Artists produce paintings and cartoons, authors write articles, photographers take pictures, architects draw plans, cartographers make maps, musicians compose music. Each is engaged in the recording of an idea or concept to transmit his idea or concept to another.

Before the advent of the printing press, the mediaeval monks were engaged in the "production" of books, with or without illustrations. A good example of a "producer" engaged in the Graphic Arts is the sign-painter.

When the single copy of a recorded idea is processed to make many copies, the procedure is called "reproduction".

In the Graphic Arts, reproduction is accomplished by the stencil process (mimeography and silk screen), photo gelatine, aniline transfer (Ditto), photooffset (lithography and planography), relief printing (letterpress and rubber stamps), gravure, engraving, Xerography, etc.

The third phase of the Graphic Arts industry concerns itself with the preservation of ideas recorded (usually printed) on paper. This is better known as (book) binding. The sheets of paper are folded into convenient page sizes and punched for plastic or three-ring binders, glued or sewed, saddle or side-stitched, and usually enclosed in heavier cover stock; leather, or cardboard covered with cloth, depending upon the length of time the publication is to be preserved.

Education is the deliberate effort of an individual to convey to another the skills, facts, vocabulary and/or attitudes he knows, by means of communication common to both the instructor and the student. This may be accomplished by formal or informal techniques; to individuals or groups; within the framework of the psychology of learning and methods of teaching.

I cannot close without mentioning the fact that "learning" can be accomplished without "education". Sir Isaac Newton "learned" about gravitation, but education is the easy way to learning, and the self-taught man often shows the horrors of unskilled labor.

AUTHOR'S NOTE—An interesting "reproduction" process was used by the Romans in the time of Caesar. A group of "scribes" sat before a leader in classroom formation and copied the letters held up before them on a piece of parchment. This probably accounts for the fact that Caesar's *Commentaries* were recorded without punctuation, paragraphing, or even the separation of words.

Absorbs Wage Raises

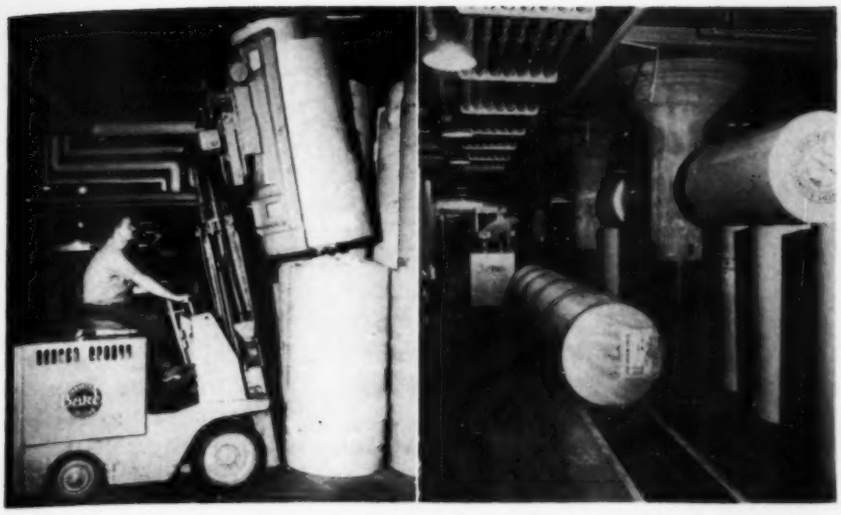
Public Printer Raymond Blattenberger notified Federal Department heads that he anticipates no increase in the cost of Federal printing as a result of recent wage increases at the Government Printing Office. Blattenberger said he expected to continue the 5% reduction in the cost of printing which he effected in 1954.

In the past few months, increases have been given to all craftsmen and a 7½% upward adjustment has been made in the salary of all administrative employees, adding about $850 thousand to the GPO's annual payroll. These increases follow upon the return by the Public Printer of $5 million of capital to the U. S. Treasury in 1954 and $3 million in 1955.

"Something's *got* to be done about the humidity in there!"

LET OTHERS READ IT

The growing demand for copies of *Printing Equipment Engineer* makes it impossible to fill requests in every case. As a regular recipient, won't you please let other executives, as well as any promising future executive employees in your plant, read this copy when you are finished with it?



Paper roll handling views in the plant of the *Christian Science Monitor*, Boston, Mass. At left is the paper roll scoop attachment on one of the newspaper's industrial trucks which aids in moving various size paper rolls both to storage areas and later to the presses. It is shown here being used for multiple stacking of small paper rolls. The scoop will accommodate one large (63 in. wide) roll or one three-quarter size (47 5/16 in. wide) roll, two half rolls each 31½ in. wide, or four dinky rolls (each 15¾ in. wide). A revolving head on the scoop attachment permits either vertical or horizontal stacking. The picture at right shows five rolls of newsprint being moved by dollie trucks on the *Monitor's* track system. Up to 20 loaded dollies may be moved at one time using this method with the rear end of an industrial truck, as shown here.

Scoop Truck Moves Varied Sized Rolls

AT THE plant of the *Christian Science Monitor*, Boston, Mass., lift trucks aid in maintaining a steady flow of paper stock to the newspaper's presses. An average of two railroad cars of paper arrive daily in the city for the plant's consumption. They are solid cars of newsprint, periodical text paper or kraft wrapping paper. The *Monitor* is without its own railroad siding, so these cars are sidetracked in a nearby freight yard while the stock is unloaded for transporting to the printing plant.

For this operation, one of the *Monitor's* industrial trucks is loaded onto a highway truck and carried over to the freight platform. The incoming rolls of paper are moved from the rail cars and loaded directly onto the highway trucks by means of the industrial truck.

The paper rolls are transported to the printing plant, rolled down a sloping dock ramp, across a concrete dock and onto a mechanical paper drop which lowers them to the basement where they are rolled into a receiving bay. The rolls accumulate there until the unloading of the rail cars is completed.

Paper Roll Scoop

At the plant, one or both of the *Monitor's* two industrial trucks are used for picking up this paper and hauling it to the storage area. Both industrial trucks are equipped with a paper roll scoop which enables them to handle, at one time, one large (63 in. wide), or one three-quarter size (47 5/16 in. wide) roll, two half rolls (each 31½ in. wide), or four dinky or single rolls (each 15¾ in. wide). The scoop attachment is designed to permit the multiple handling of the smaller newsprint rolls as well as full size rolls. The size of the scoop attached to the truck also permits it to be accommodated in the *Monitor's* limited capacity freight elevator for movement back and forth between the basement and the receiving dock.

Newsprint storage occupies an area of the basement away from the presses which includes the space under the unloading dock. Production storage takes up a smaller area alongside the presses. As the rolls in the production storage area are used up on the presses, they are replaced by stock from the main storage area.

Truck Pushes Dollies

This stock is moved in a horizontal position on newsprint roll dollies which roll on a track running the entire length of the basement. Several loaded dollies are moved at one time by pushing the line of dollies using the rear end of one of the industrial trucks. This method permits movemen of as many as 20 newsprint rolls at a time from one storage area to the other.

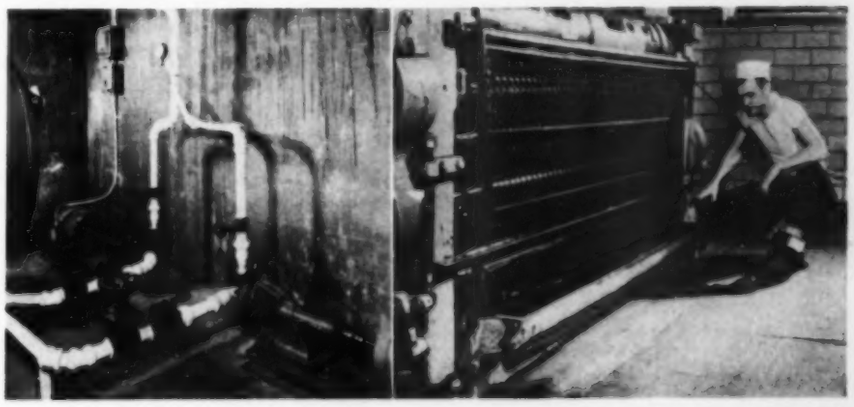
Upon reaching the storage area, the rolls which are carried on the dollies are pushed onto the scoop of the industrial truck and placed in their proper storage position. The truck is equipped with a revolving head attachment allowing the operator to stack either vertically or horizontally. Both storage arrangements are used, depending on the space available. The basement space allotted to newsprint storage is of sufficient area to accommodate a 30 day supply. Occasionally, the scoop attachment on the *Monitor's* two industrial trucks are removed and replaced by fork attachments for the handling of skid loads of paper.

Ink Delivery

An increasing number of smaller town dailies are purchasing ink in bulk and delivering it to the press with a centrifugal pump. In recent installations at the Elyria (O.) *Chronicle-Telegram* and the East Liverpool (O.) *Review*, ink is delivered in quantities of 2000 to 3000 gal. and fed into storage tanks from outside the plant. The ink is then pumped through pipelines to the presses by centrifugal pumps. Each fountain is equipped with a valve which permits filling as required. The pumps are also used with the feed valve closed as a means of agitating the ink and preventing sedimentation. The pumps employed at the two plants are standard models manufactured by the Deming Company.

At the *Chronicle-Telegram* ink is delivered in 2000 gal. quantities, four times a year, to a basement storage tank located 68 ft. below the pressroom. The paper has a daily run of 22 thousand. At East Liverpool, ink is purchased in 3000 gal. quantities and fed to presses from a storage tank through a pipeline beneath the *Review's* 32 page Goss unit tube press

Clifford Smith, press-stereo superintendent of the *Review*, and Leo Carl, mechanical superintendent at the *Chronicle-Telegram*, report complete satisfaction with the system. They point to savings produced by bulk purchases of ink and fewer man hours required for the job.



The pumping system pictured at left, using two Deming centrifugal pumps and a 2000 gal. storage tank, supplies ink to the fountains of the Elyria (O.) *Chronicle-Telegram* presses. The ink is delivered in bulk to the newspaper four times a year. At right, a pressman opens a valve to fill an ink fountain before a daily press run.

How to Assure Attendance at Technical Conferences

SOME of the Best Graphic Arts technical conferences are those held by the R&E Council, TAGA, Craftsmen, Litho Clubs, the ANPA Mechanical Conference and a number of regional mechanical conferences. Where the conference is applicable to the executive's work, all plant and production executives should attend so far as possible. Parts of the Photoengravers, Electrotypers and other employer groups are highly technical. These particular sessions could be attended by printing plant executives, too, especially those meetings at which equipment and supplies are exhibited.

We hear comment occasionally by mechanical executives who state they do not attend technical conferences because of lack of interest by the boss. We have a suggestion to remedy "lack of boss interest." Adoption of the suggestion will make it possible for the mechanical executive to attend such meetings—time off with expenses paid for the trip.

In a number of instances we happen to know that when a plant executive returned from a conference he did not take the time or trouble to write out a report to the boss. He rendered an accounting of the financial part of the trip as was expected. If he made any comment at all to his management executive he probably stated he had a good time and "learned a lot." The resultant management indifference regarding attendance at subsequent conferences by the plant executive is strictly the fault of the plant executive.

Let it be said that management executives, including plant superintendents, like to know *how* the company will benefit from the money expended.

The best plan to insure regular attendance at future conferences is to prepare a report about the trip. If you are a foreman, prepare three copies—one for management, one for the plant superintendent, and one for your own files.

The preliminary report may be written in pen or pencil and then typed on a typewriter (having someone do it if you don't operate a typewriter), or by having a linecasting machine operator set the written copy on the machine and then take several proofs. The report should be prepared in simplest form. In it, state what ideas you secured from conference attendance which will benefit supervision or operation in your plant. It is a well established fact that many executives gather in congenial groups in a manufacturer's or supplier's room. It is in these environments that the discussion is highly informal and many valuable ideas are interchanged which never reach the conference floor.

No matter whether or not you have secured an idea from one of the conference sessions or through an informal bedroom gab session, include it in your report. If you have obtained just one idea, explain it fully and how much time or reduced expense you estimate will result after you have put it into effect in your plant.

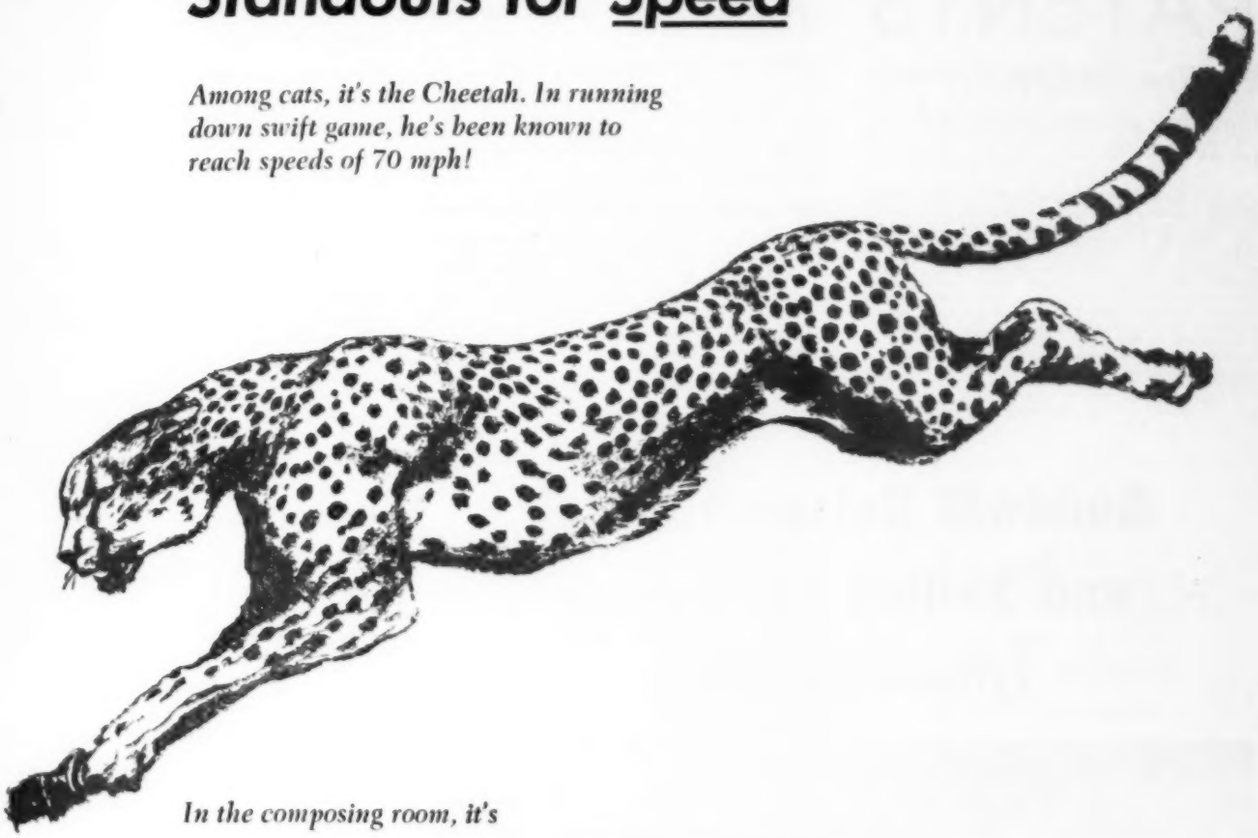
By all means, look for ideas about handling personnel, accident prevention, improvement in a method you already use, new processes, new machinery, or new products that will have value in your company's operation.

For those executives who have never been able to persuade the boss about the value of technical conferences, there too, is a plan whereby the boss may be converted. Some executives attend conferences at their personal expense. In such case, why not prepare a report along the lines outlined above and present it to management or to the plant superintendent? Omit details about banquets and entertainment, and do not request reimbursement for expenses. If the report contains a money-saving idea or one that will facilitate production, it's a ten-to-one shot the management executive will request you to submit an itemized list of expenses so you can be reimbursed. Reports of two different conferences which you have attended might be required. In most instances one well worded report will be sufficient to insure future attendance at technical conferences pertaining to your particular branch of the business.

Try making a typed report of the conference you have just attended—it's one of the best methods you can employ to increase your stature as an executive.

Standouts for Speed

Among cats, it's the Cheetah. In running down swift game, he's been known to reach speeds of 70 mph!



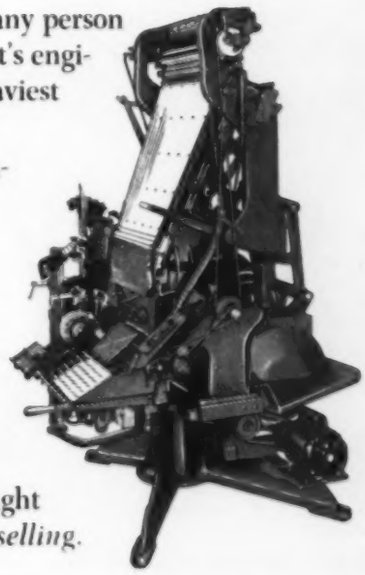
In the composing room, it's

the Linotype COMET!

The Linotype Comet can cast slugs *faster* than any person or mechanical device can operate its keyboard. It's engineered for speed that more than meets the heaviest production loads.

The Comet also is unmatched for design simplicity that saves valuable maintenance time.

For example, the keyboard and front swing open quickly and easily—an exclusive Comet feature, and the keyboard frame with the "ee" attachment can be lifted out as a unit, opening the machine from front to back for speedy lubrication and inspection of assemblies.



No wonder the Comet, the *fastest setting* straight matter machine in the world, is also the *fastest selling*.

Mergenthaler Linotype Company, 29 Ryerson Street, Brooklyn 5, N.Y.

• LINOTYPE •

Set in Linotype Fairfield Medium and Spartan families

Agencies: Atlanta, Boston, Chicago, Cleveland, Dallas, Los Angeles, New York, San Francisco. **In Canada:** Canadian Linotype, Limited, Toronto, Ontario

LEADERSHIP THROUGH RESEARCH

PATENTS

For The GRAPHIC ARTS

Covering patents issued July 5, 12, 19 and 26.

All new patents for the Graphic Arts are reported exclusively for *Printing Equipment Engineer* by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. *Printing Equipment Engineer* is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Composing Room Equipment:

MANUFACTURE OF TYPE BARS

Invention is directed to matrices bearing curved character configurations for producing type bars having concave shaped raised characters thereon which may be used for printing longitudinally on curved or cylindrical surfaces. Patent 2,712,247 by John W. Quadt, assigned to Mergenthaler Linotype Co.

TYPOGRAPHICAL CASTING MACHINE

The quadding and centering attachment of the invention is utilized to clamp the vertical jaw actuating rod of the machine against movement just before final line squeezing pressure is released to hold the jaws in contact with opposite ends of a matrix line until it has been lifted far enough to clear them. Patent 2,712,380 by Ranson H. Turner, assigned to Mergenthaler Linotype Co.

PHOTOCOMPOSING MACHINE

Negatives or color transparencies can be accurately positioned for copying by the use of a vacuum frame composed of a cover frame and a magnet bed of corresponding dimensions. Patent 2,713,294 by Jay D. Padgett.

PRINTER'S FORM

This lock-up mechanism for printer's forms eliminates the need for furniture or locking the form directly in the chase or galley. A suitable form of quoin is used, allowing conventional locking-up of forms. Patent 2,713,824 by Henry J. Hilland.

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Platemaking:

PROCESS FOR THE DIRECT PRODUCTION OF POSITIVE PHOTOGRAPHIC IMAGES

Useful in production of printing matrices, screen plates, etc., the process provides for the addition of colloidal noble metals or noble metal compounds to silver chloride photographic materials to aid in sensitization of the materials. Patent 2,712,995 by Edith Weyde, assigned to Agfa Aktiengesellschaft fur Photofabrikation.

PLANOGRAPHIC PRINTING

Planographic printing plates are produced by means of facsimile printing by employing a transfer sheet for production of enscribed planographic plates and an electro-recording unit using an electrically conductive sheet and an image delineating scanning stylus. Patent 2,713,822 by Douglas A. Newman, assigned to Columbia Ribbon and Carbon Mfg. Co.

PLANOGRAPHIC PRINTING PLATE

This presensitized lithographic plate has high dimensional stability and is suitable for use where accurate registration is required, such as in multicolor work. Patent 2,714,066 by Clifford L. Jewett and John M. Case, assigned to Minnesota Mining and Mfg. Co.

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Printing Presses:

COUNTING DEVICE

The counter is adapted for controlling a printing press and to automatically count lots of paper, books, etc. Rims of counter wheels can be arranged to actuate a magnet to lift a pin bar to momentarily stop a stream of newspapers, travelling on a conveyor from a press to the bundling room, to thus make a space between piles of 10, 20, 30, or other desired lots of papers. Patent 2,712,642 by Emerson P. Jennings.

MEANS FOR TIGHTENING AND ADJUSTING FLEXIBLE BANDS ON PRINTING CYLINDERS OF ROTARY PRESSES

The bearings at both ends of a reel to which both ends of a printing band are attached may be eccentrically adjusted and askew printing indicia quickly brought into parallel with a longitudinal gage bar by rotating the eccentrics in opposite directions. Patent 2,712,789 by Edward Leeberg.

PRINTING PRESS AND HANDLING OF SHEETS

An apparatus for transferring sheets from the sheet support of a press, such as offset, to the impression cylinder is initiated by grippers combined with pneumatic mechanism to provide simple and high speed operation. Patent 2,712,935 by Harold W. Gegenheimer, assigned to Miller Printing Machine Co.

SHEET REGISTERING MECHANISMS

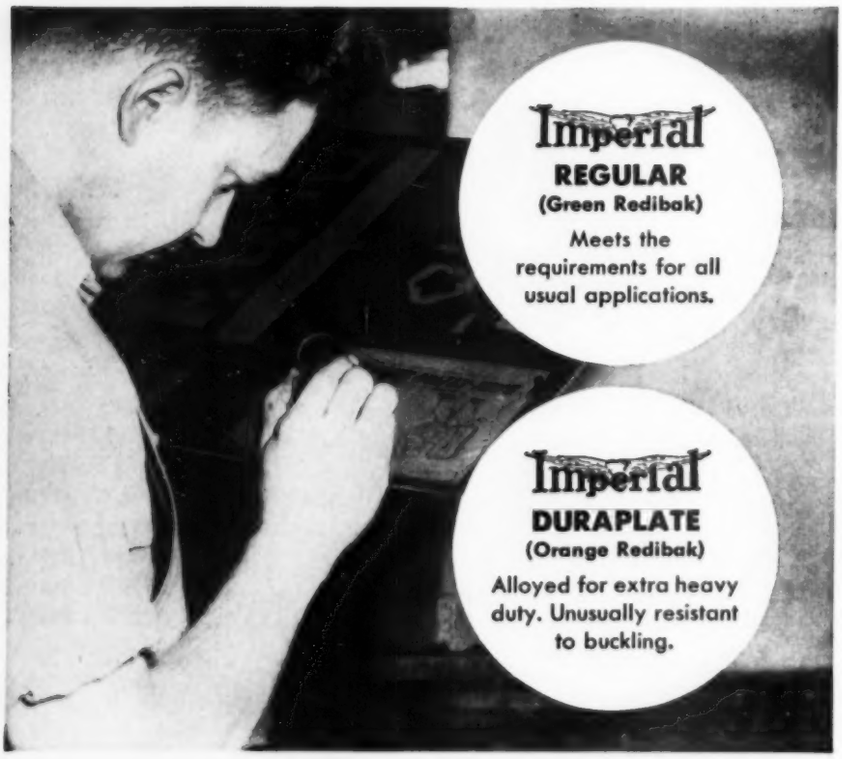
This is a sheet register for side-registry during feeding. A spring urges the roller and driving member into face to face relation. Circumferentially distributed parts of different frictional character on the roller adapt it to the gripping of sheets of different types. Patent 2,712,936 by Headly Townsend Backhouse.

VISIBLE CARD INDEX WITH CARDS REGISTERED FOR PHOTOGRAPHIC REPRODUCTION

The patent reveals a method, utilizing a card structure and visible index, which is applicable

Goodwill Between Metal and Skilled Craftsman

Imperial Zinc



Under the glass of the engraver, the fine, uniform qualities of Imperial Zinc are quickly apparent. Highly resistant to buckling, easy etching, withstands multiple bites—all add up to Goodwill Between Metal and Craftsman.

IMPERIAL TYPE METAL COMPANY

Also distributors of magnesium sheets

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to production of catalogs, directories, manuals and other forms of printed books, folders, pamphlets and newsprint by photo-offset printing methods in current use directly from the cards. Patent 2,713,502 by Charles M. Ehnes, assigned to Remington Rand Inc.

PRINTING CYLINDER VACUUM CONTROL

A control for sheet fed printing presses of the impression cylinder type provides a simple, reliant and efficient timing sequence. Prevention of oil seepage through connection of the main vacuum line to the cylinder elements is done without passing through the cylinder journal box. Patent 2,713,823 by Edgar A. Luscombe, assigned to Miehle Printing Press and Mfg. Co.

SHEET FEEDER

Adapted for use with rotary offset lithographic presses, the apparatus is operative to break away individual sheets from the top of a pile and move the sheets in overlapped progression by mechanical elements having rotary or semi-directional movement as distinguished from reciprocating movement. Patent 2,714,006 by Paul W. Layden.

•

Binding, Cutting, Perforating:

MACHINE FOR GLUING BOOKS

Sixty to eighty books of various thicknesses can be automatically glued without brushes, using hot or drier type glue. Books are handled individually instead of in known batch form. Patent 2,712,141 by Henry Sieb.

SIGNATURE FEED FOR STITCHING MACHINES

The machine collects and stacks signature assemblies in a horizontal position, rather than on their edges. It will handle signatures of varying sizes and stitching of successive signatures may be staggered without changing the machine operation. Patent 2,712,648 by John W. Miller, assigned to F. P. Rosback Company.

BOOK BINDING MACHINES

Glue applied to the backs of books is conditioned, prior to rounding and backing the books, by subjecting the glued books to blasts of hot and cold air under pressure. This saves a drying and stacking step. Patent 2,713,212 by Harry William Taylor, assigned to Smyth-Horne Ltd.

•

Miscellaneous:

OFFSET-PREVENTING COMPOSITIONS

This aqueous starch-bentonite offset-preventing composition is stabilized against decomposition with gluconic acid, and is capable of use with all types of printing inks. It is particularly useful in printing of plastic films with drying oil type inks. Patent 2,713,307 by George M. Adams, assigned to The Visking Corporation.

Production and Mechanical Executives are invited to submit to the editor informally in a letter devices which have helped production in their plants.

Bob Ashby Passes—H. D. (Bob) Ashby, 87, passed away on August 19 at his home in Lakewood, O. For many years, he was superintendent of employment at the Cleveland *Plain Dealer*. During the last decade he was not too active at his place of employment but he liked to feel that he had never retired from active duty. We want to comment that Bob Ashby and John Keating, former production manager of the Milwaukee (Wis.) *Journal*, each was a trend in the newspaper printing industry. Keating's forte was as a manufacturing or production specialist. Ashby's strong point was company relations with personnel in the plant. Each was outstanding in his particular field. The two were fast friends and both executives left their mark upon the industry. Each was influential and many of their ideas are now accepted as regular practice by production and/or mechanical executives. Ashby was proud of his 46 years of continuous association with the Cleveland *Plain Dealer*. His philosophic advice was extended to many people with personal difficulties. If a person seeking Ashby's advice followed instructions he (the seeker) always came out on top.

Midwest Name Change—Midwest Stereotype Supply Co. has changed its name to Midwest Publishers Supply Co. Address for the firm remains the same: 1651 Blue Island Ave., Chicago 8, Ill.

Alan Wood Steel—John L. Hallman has been appointed manager of Alan Wood Steel Co.'s marketing division.

THE C&P NEW
Craftsman
WITH SIDE DELIVERY
10 X 15 12 X 18
EQUIPPED WITH *DUAL*
IMPRESSION CONTROLS

Impression control on the NEW CRAFTSMAN provides both accurate impression adjustments and positive means for keeping form and platen parallel. Two handwheels are used. The upper handwheel regulates the impression. The lower handwheel keeps platen and bed always exactly parallel. These *dual* controls, exclusive with C & P Craftsman Presses, reduce make-ready time from 25 to 40%. But savings in make-ready is only one of the profit-making advantages of the NEW CRAFTSMAN Automatic. Other profit-making features for printers include:

NEW SIDE DELIVERY
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REGISTERS TO LEFT OR RIGHT
EXTRA LARGE SHEET SIZE
TIME PROVED INK DISTRIBUTION
HAND-FEEDING PRACTICABLE

THE NEW *Craftsman*

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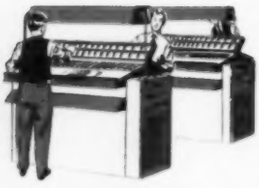
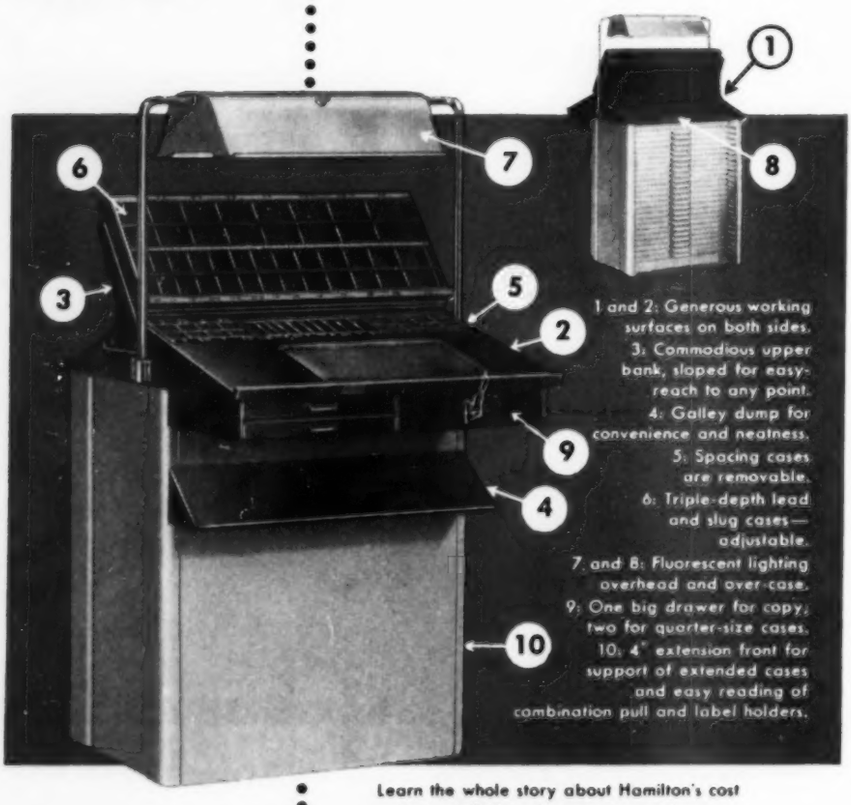
Another boost from Hamilton toward higher Composing Room Profits!

Costs go down, profits up, with Hamilton type cabinets. Everything's right at hand — where it's needed — ready for top-speed composition on well lighted working surfaces. Note these typical time and labor saving features of Type Cabinet Model 101 —





1 and 2: Generous working surfaces on both sides.
3: Commodious upper bank, sloped for easy-reach to any point.
4: Galley dump for convenience and neatness.
5: Spacing cases are removable.
6: Triple-depth lead and slug cases—adjustable.
7 and 8: Fluorescent lighting overhead and over-case.
9: One big drawer for copy; two for quarter-size cases.
10: 4" extension front for support of extended cases and easy reading of combination pull and label holders.

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HAMILTON MANUFACTURING COMPANY
Two Rivers, Wisconsin

Hamilton PRINTERS EQUIPMENT

NEWS ITEMS

Outstanding Craftsman—Frank Voelkl, superintendent of the forms division, The Standard Register Co., Dayton, O., was elected Outstanding Craftsman of the Fifth District, Intl. Assoc. of Printing House Craftsmen, Inc., at a recent Fifth District meeting in Cincinnati, O. A member of the Dayton Club for 22 years, Voelkl has been a member of its board of governors for 13 years and served two years as president. Voelkl's election was unanimous after a presentation made by A. Gordon Ruiter, jr., chairman of the Dayton Club's Voelkl committee and general foreman of the pressroom at Standard.

Lundbye Joins Todd—Axel Lundbye has joined The Todd Company, Inc., Rochester, N. Y. as consultant to the Printing Engineering Department, Research Division. Lundbye's address is The Todd Company, Research Division, 1150 University Ave., Rochester, N. Y.

SCHULTZ

Executive Personnel Changes—John J. Fields, III, president of the William G. Herrick Ink Co., Inc., recently announced changes of executive personnel in the corporation. By action of the board of directors, Charles T. Schultz was elected vice president. Schultz has been with Herrick Ink since 1940. David J. Raibert who has been with the company since 1951 as its controller, was elected secretary. Charles H. Merbitz has just joined the company and will have prime responsibility for sales in the Southern territory. Merbitz was formerly associated with United American Metals, Eastern Division, as sales manager.

Newspaper Design Seminar—Opportunity for Southern newspaper management and editorial personnel to study and discuss modern newspaper typographical and make-up techniques is offered by the Seminar on Newspaper Design. Seminar to be held at the International House, New Orleans, La., Oct. 24 through 28, the week preceding the annual convention of the Inter American Press Assoc. The meeting, sponsored by the Mergenthaler Linotype Co., is the last scheduled this year. Gilbert P. Farrar, Laguna Beach, Calif., will conduct the seminar, and newspaper managements will be invited to enroll their editorial and make-up personnel. Newspaper styling, including news pages, women's pages, editorial pages, and the handling of features, will be discussed.

Californians Act—Representatives of all segments of the Graphic Arts in-

dustry in Southern California have organized the Printing Week Council of Greater Los Angeles, Inc. Purpose of this organization is the annual promotion of Printing Week. It's believed to be the first of its kind in the country. Charter members of the Council include Printing Industries Assoc., the Los Angeles Club of Printing House Craftsmen, the Photoengravers Assoc., the Printers Supplymen's Guild of Greater Los Angeles, and the Women's Graphic Arts Club. Elected officers of the Council are Gordon Holmquist, president; Perry Long, vice president; Tim O'Keefe, secretary-treasurer and appointed chairman of Printing Week 1956. Other appointed delegates are Wes Scott, PIA; Allen Sulzer, Supplymen; Norm Shanks, Craftsmen; Sou Carroll and Betty Jane Hart, Women's Graphic Arts Club; and Lew Wilkins, Photoengravers.

HAZLEWOOD

Miller Appointment—J. M. Hazlewood has been appointed the Dallas (Tex.) representative of the Miller Printing Machinery Co. In announcing the appointment, F. G. Betlock, Miller vice president and western division manager, said Hazlewood is well versed in the Graphic Arts industry and has had several years experience in the sale of capital goods.

Printing Management School Grows—New applications for admission to Carnegie Institute of Technology, Pittsburgh, Pa., numbered almost 3500 this year. This is the second consecutive year the number of applicants was 25% above 1953.

In the School of Printing Management, 180 new applicants were received, 85 more than last year. Fifty new students, ten more than the previous year, were accepted. The 20% increase is in line with the Printing Management School's program of expansion. Expansion in the School of Printing Management has been anticipated. Four new curricula options have been announced for this year and the school will continue to increase the number of new students admitted. Although women are now eligible for admission none have been accepted so far this year. Three freshmen received scholarships whose value totaled $1880.

Linotype Parts Salesman — The addition of Thomas C. Curry to its sales staff was recently announced by Linotype Parts Co., Inc. Curry will cover Kansas, Missouri, Iowa and eastern Nebraska. Thayne Mason who previously traveled in this area, will relocate in Dallas, Tex., and will service Texas, Oklahoma, Arkansas and Louisiana. Curry has had 26 years of printing and typesetting ex-

CURRY

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For a fast, efficient flow of metal, Nolanize your remelting! Nolan will custom-design installations to meet your specific requirements. Write today for the facts on Nolan Remelter and Meltevators . . . or for a call by a Nolan Representative. No cost or obligation.

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Up to 10 tons capacity with or without Meltevator

perience. Curry has been with Continental Color Press for the past nine years as foreman of the Linotype department.

Graphic Arts Employment—Expansion of its nationwide, confidential employment service to include journeymen has been announced by Helen M. Winters, manager of the Graphic Arts Employment Service, 307 E. Fourth St., Cincinnati 2, O. Miss Winters said the service has enjoyed a steady growth since its establishment in 1952. The business now requires the services of three people. All assignments either from employers or applicants are handled on a confidential basis.

NEELY

New Roller Company—Establishment of the Neely Roller Co., Inc., 2—14th St., W., Birmingham 8, Ala., has been announced by W. E. Neely, president. Neely resigned last January as vice president in charge of sales of Sam'l Bingham's Son Mfg. Co. Neely in conjunction with officials of Hi-Speed Roller Co. also announced that Hi-Speed will manufacture all composition rollers for the Neely Company. The Neely Company in turn, will manufacture all rubber rollers sold by the Hi-Speed Company. As part of the new arrangement the former Hi-Speed Atlanta, Ga., office will be operated as a branch of the Neely Roller Co., under the management of John D. Nix.

Headed by Woermann—At the age of 83, B. J. Woermann former salesman for American Type Founders, Inc. has been named president of a new firm, Cincinnati A-T-F Type Sales, Inc., located at 424 Commercial Square. The new firm has been organized to handle distribution and sale of American Type Founders' type, rule and foundry products. The company has been granted exclusive franchise by American Type Founders for the southern half of Ohio, the northern portion of Kentucky and part of West Virginia.

Vulcan Rubber Products announces that Robert W. James has joined its sales staff. James comes to Vulcan from Haartz & Mason, Inc.

Hoe Acquires Plant—Acquisition of the plant of the Carolina Saw and Tool Co., High Point, N. C., has been announced by J. L. Auer, president of R. Hoe & Co., Inc. It will be known as the Carbide Saw and Tool Div. of the Hoe Company. When renovations have been completed, the operation will include a factory and warehouse. Clarence Goodman, former head of Carolina Saw and Tool will remain at the plant as general manager.

Publication Appointees—David Stimmel has been permanently appointed in charge of the Boston (Mass.) Herald-Traveler Corp., publications department, a newly created section. Announcement was made by James E. McGowan, production manager. Charles Cochrane has been named assistant foreman of the *Herald-Traveler's* nightside news room by James P. Quirk, superintendent. Cochrane will be assistant to Frederick J. Walsh, foreman.

Tour Through Paper Mill—A number of delegates to the 36th annual convention of the Intl. Assoc. of Printing House Craftsmen, Inc. on August 10 were guests of Champion Paper's General Sales Dept. A large party of registrants and wives were taken on a tour of Champion's Ohio

Division mill in Hamilton, O. Included in the group are (left to right) Frank Parker, Parker Pad and Printing, Toronto; Mrs. and Mr. Milton C. Voertman, Concordia Publishing House, St. Louis, Mo.; John Redlin, Champion Paper's Cincinnati Sales Office and Ron Drake, technical advisor in the General Sales Dept. Acting as official hosts to the party, Colter Rule, John Schuler and Red-

lin were among convention registrants from the company's Cincinnati Sales Office.

Short Run—*The Craftsmen's Chronicle*, daily newspaper published by Miller Printing Machinery Co. during the Intl. Craftsmen's convention in Cincinnati, O., Aug. 8-10, was a great success while it lasted—three days. The staff included J. K. Kerr, editor; H. T. Eckhardt, business manager; W. T. Clawson, treasurer; Dot Davis, fashion editor; Jean Harris, food editor; and Helen Rosenthal, women's editor.

SMITH

Joins Huber—O. M. Smith, jr., has joined the J. M. Huber Corporation's ink division sales force, announces Louis A. Lara, general sales manager of the division. Smith has been assigned the territory of North Carolina, South Carolina, northern Georgia and northern Alabama. His home will be Atlanta, Ga.

Guild Officers—At the annual meeting of the Intl. Printers Supply Salesmen's Guild held on Aug. 8 in Cincinnati, O., the directors elected the following officers for 1955-56: President, Lee Augustine, vice president, The Printing Machinery Co.; 1st Vice President, Myron F. Lewis, vice president, The Graphic Arts Pub. Co.; 2nd vice president, Damon H. Moore, regional manager, The Miehle Printing Press & Mfg. Co.; Secretary, Louis A. Croplis, regional manager, American Type Founders, Inc.; Treasurer, Allen B. Sulzer, sales representative, California Ink Co.

Two Promoted at 3M—Dan J. Blomberg has been promoted to product merchandiser, printing products division, and James C. Greene, jr., has been promoted to sales supervisor, duplicating products division, Minnesota Mining & Mfg. Co. Blomberg will coordinate planning and development of sales programs for Spherekote brand products, lithographic plates and other 3M printing products. Greene will supervise the sale of Thermo-Fax brand products in the West Coast area.

Oliver H. Reeves, 81, of Arlington, Mass., retired technical supervisor in the maintenance department of the Christian Science Publishing Society, died Aug. 25.

Ink Sales Agents—Millard C. Pintard and Harry L. Leyland have announced the formation of the Pintard-Leyland Co. The new firm will act as sales agents and distributors of ink, ink equipment and supplies for newspapers. Pintard-Leyland will be manufacturer's representative for the newspaper inks of the J. M. Huber Corp., Ink Division in certain areas. Offices will be located at 1478 Chestnut Ave., Hillside, N. J. and 4398 San Jose, Jacksonville, Fla.

Speak at Paper Clinic—Ron Drake, technical advisor in The Champion Paper & Fibre Co.'s general sales department; and Phil Evanoff, of the Mead Company's sales service division, were principal speakers for the Sept. 15-16, 29-30, and Oct. 6-7 Paper Performance Clinic. The clinic was staged by the Central States Paper Trade Assoc. in Cincinnati, O. Offset and letterpress paper processes were discussed.

John Pomazon has joined George F. Motter's Sons, York, Pa., as service engineer, according to George F. Motter, president. Pomazon was formerly with the Babcock Printing Press Corp. His new duties will include coordination of engineering and manufacturing and related activities.

With Pardonable Pride—Cowan Pressroom Products, Inc., manufacturer of Morgan Expansion Roller Trucks, Cowan Ball Bearing Perforators and Scorers, Cowan Slitters, Auxiliary Sheet Bands, Auxiliary Brushes, and Cowan Perforating Grippers, celebrates its 40th anniversary in September, 1955.

Ink Plant Opening—The J. M. Huber Corp. ink plant at Huber, Ga., was recently opened as announced by J. S. Hart, vice president of the company's Ink Division. The Georgia ink plant will handle the complete line of Huber inks for the Southeast. Huber's ink plant is adjacent to its Clay Division operations.

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Graphic Arts Equipment and Supplies

Literature for the Asking

Keep Yourself Informed. The folders and bulletins listed below all pertain to modern equipment, supplies, processes and/or methods. These have been prepared especially for plant managers, superintendents and foremen. Please ask for the pieces selected by number and send your request to Literature Dept., *Printing Equipment Engineer,* 1276 West Third St., Cleveland 13, Ohio.

Composing Room

TYPOGRAPHY BY MAIL

A kit containing everything to make it easy to order typography is being offered by Monsen Typographers of Chicago, Los Angeles and Washington, D. C. The Kit is available to both new and established customers outside the messenger delivery area. The kit is in file folder form with a summary of Monsen's complete typographic service, a supply of typographic instruction sheets for customer's use and a quantity of postage-paid airmail and regular mail labels addressed to the closest Monsen plant. For a copy, please mention PEE No. 432L in your request.

MONOTYPE MATRIX CATALOG

A 15-page, 6 in. by 9 in. catalog lists the various fonts of matrices now available through the Lanston Monotype Machine Co.'s Matrix Rental Plan. Fonts are listed according to type family and then alphabetically. It is also indicated as to whether they are Display or Giant caster faces. Please mention PEE No. 435 L when requesting a copy.

DISPATCH ROOM EQUIPMENT

Hamilton Manufacturing Co.'s new line of dispatch room equipment is described in a four-page, 8½ in. by 11 in. folder. The two-color folder is used to describe the various standard steel units in the line. Abundant illustrations show some typical installations. Both standard and special style trays are also illustrated. For a copy, please mention PEE No. 436 L in your request.

METAL BASE AND FURNITURE

A one page leaflet is descriptive of light metal base and furniture manufactured by The Monomelt Co., Inc. The four discussed are Flottweg Cored Metal Base, Flottweg Solid Base, Mille Magnesium and Flottweg Duraluminum Lockup Furniture. For a copy, please mention PEE No. 413L in your request.

FILMOTYPE INDEX

To provide Filmotype users with a convenient reference, regarding the Filmotype photolettering machine, a *Letter Styles Index* has been published by Filmotype Corporation. Containing over 275 styles of hand-lettering styles, the *Index* is designed for style comparison and classifies the alphabets in logical divisions with regard for weight and condensity. The 8 page 16 in. by 19 in. wall-size *Lettering Styles Index,* is metal-edged for permanent hanging. A smaller desk-size *Index,* 9 in. by 11 in. has also been designed for layout men and typographers. For a copy please mention PEE No. 414L in your request.

V-BELT MOTOR DRIVE

Linotype's new V-Belt Motor Drive is described in an illustrated broadside released by Mergenthaler Linotype Co. The literature points out the advantages of the new drive, and a keyed photograph shows its simplified construction. Drive utilizes a standard ½ h.p. electric motor. The Linotype V-Belt Motor Drive is offered in a choice of variable speed or any one of four fixed speeds. For a copy, please mention PEE No. 429L in your request.

Platemaking

ETCHING MACHINE

The latest Master Etching Machine Co. etcher in stainless steel for zinc and magnesium etching is described in a one-page, two-color, 8½ in. by 11 in. bulletin. A photograph of the machine and a diagram of the air and etching fluid systems illustrate the piece. For a copy, please mention PEE No. 416L in your request.

DARKROOM CONTACT PRINTER

A one page, 8½ in. by 11 in. bulletin is used to describe the Gelb Darkroom Contact Printer, manufactured by the Jos. Gelb Co. Printer is available in the following sizes: 22 in. by 28 in.; 28 in. by 38 in.; and 35 in. by 45 in. For a copy, please mention PEE No. 417L in your request.

ROBERTSON 320 CAMERA

A technical booklet covering the operation of small cameras and negative making has been released by Robertson Photo-mechanix, Inc. The 80 page booklet is entitled *The* 320 *Manual of Operation.* The booklet is explana-

tory of the uses of the Robertson 320 darkroom camera and how the versatility of its operation permits use in photo departments along with view cameras and microfilming equipment, and also reproduction and advertising departments with offset duplicators and other such reproduction equipment. Booklet features over forty photographs and diagrams including charts showing proper screen distances, standard contact screens with corresponding film sizes, and a system of simplified lens settings. For a copy, please mention PEE No. 415L in your request.

Pressroom

FIVE COLOR ROTARY LETTERPRESS

C. B. Cottrell & Sons Co. presents in a handsomely printed and illustrated four page bulletin (9¼ in. by 12⅝ in. size) One Impression Five Color Letterpresses. Also presented are general specifications for two color presses and for boxboard presses with single and double delivery. Please mention PEE No. 418L when requesting a copy.

FLEXOGRAPHIC INK DATA

Bensing Bros. & Deeney recently published a Flexographic Ink Technical Data sheet covering all aspects of the 400 Series Excellopake Flexographic Ink. The four page bulletin contains general description and characteristics of the ink; applications, such as on Cellophane, polyethylene, foil and paper cartons; and recommendations for proper use. A special page contains a table on the properties of commonly used flexographic and rotogravure ink solvents. For a copy, please mention PEE No. 419L in your request.

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After you have selected the literature described in these pages which you would like to have sent to you, please jot down the identification numbers on this coupon and mail to

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C & P CYLINDER PRESS

Features and specifications of the Chandler & Price Cylinder Press, 12½ in. by 17$\frac{7}{16}$ in. chase size, are contained in a two page illustrated letterhead size bulletin. Please mention PEE No. 420L in your request.

OFFSET PRESSMAN'S GUIDE

A pressman's guide with tips for running all aluminum presensitized photo offset plates is being offered by Minnesota Mining and Mfg. Co. The guide, designed for hanging in the pressroom and indexed for easy reference, contains two types of information. Included are suggestions relating to preparing the plate for the press and a section on trouble shooting. For a copy, please mention PEE No. 437 L in your request.

KLUGE PRESS BULLETINS

A group of two-page, two-color, 8½ in. by 11 in. bulletins are used to describe the Kluge 10 by 15 and 12 by 18 automatic platen presses which can be equipped as printing presses and/or die cutting presses. Overall dimensions on this series of presses varies from 40½ in. by 56 in. up to 54 in. by 80 in. When requesting one of these bulletins, please mention PEE No. 423L.

FOUR COLOR PRESS

Miller Printing Machinery Co. has issued a colorful brochure on the M. A. N. Poly-Automat 14½ in. by 20½ in. letterpress. The booklet is fully descriptive of the press and examples of halftones and four-color process work are included. For a copy, please mention PEE No. 424L in your request.

BOARD AND SHEET SCANNER

A four-page, two-color, 8½ in. by 11 in. bulletin is used to describe the Winton Engineering Co. Board and Sheet Scanner. It operates on the principle of focusing an intensely brilliant light parallel to the surface of a sheet. This makes the scanner one of the best methods for inspecting anti-offset spray deposits, says the manufacturer. For a copy, please mention PEE No. 425L in your request.

Bindery

BINDING INSTRUCTIONS

General Binding Corp.'s new brochure, *Now you can bind all types of literature*, describes how plastic bind or loose leaf bind can be used within any organization. Illustrations and information are included about the modern binding system for reports, catalogs and manuals. For a copy, please mention PEE 426L in your request.

Miscellaneous

PRODUCTS CATALOG

A 40 page catalog of Orville Dutro & Son Inc.'s products has been produced by Western Gear Works. Manifold printing presses, paper coloring machines and collators are included in the catalog. Printed in full color and plastic bound, the catalog includes numerous illustrations of Western's plant facilities from its engineering section to its testing and inspecting operations. For a copy, please mention PEE No. 427L in your request.

RETRACTILE CORDS

Koiled Kords, Inc. has released an eight page bulletin descriptive of its retractile electrical cords with Neoprene or rubber jackets coiled in spring-like shape. Cords can be used wherever electrical equipment or its cord is subjected to movement, such as on Linotype keyboard lamps and in conjunction with trolley duct overhead power supply systems. The bulletin contains catalog specifications and application data. For a copy, please mention PEE No. 428L in your request.

WHEELWRIGHT PORTFOLIO

The Mead Sales Co. recently released a new Wheelwright Olympic Bristol Demonstration Portfolio containing six insert pieces. The portfolio demonstrates uses of the grade such

New "D-MOUNT"® Interchangeable Sleeves run true and concentric every time

Patent Pending

• "D-MOUNT" sleeves of varying diameters fit *single* universal "D-MOUNT" mandrel without use of adapters or set-screws

• "D-MOUNT" sleeves are made of lightweight alloy... easy to handle, store, ship

• Unique "D-MOUNT" system assures accurate, concentric assembly of sleeve and mandrel regardless of how often assembled and disassembled

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as for announcements and programs. The cover and inserts were printed by letterpress, offset lithography and screen process. Each piece includes production data such as type faces used, speed of run, press size, etc. Samples are in white, fawn, ivory, mauve, buff and gray. Other colors available are blue, gold, green, rose and yellow. For a copy, please mention PEE No. 421L in your request. request.

MARKING MACHINES

A bulletin including specifications and illustrations of hand operated, semi-automatic and automatic Rejafix marking equipment has been released by Popper & Sons, Inc. Included are eight pages of various marking presses for such objects as shirt collars, labels, metal plates, vials and ampuls. For a copy, please mention PEE No. 422L in your request.

ELECTRIC FORK TRUCKS

Electric fork trucks with capacities of 1500 lbs., 2000 lbs. and 250 lbs. are described in a six page bulletin made available by Baker-Raulang Co. The trucks are Baker's FS battery powered line. In the illustrated two-color bulletin are contained tables of dimensions, capacities, weights, speeds; details of design and construction; and pictures of special attachments available for FS trucks such as the paper roll grab. For a copy, please mention PEE No. 438 L in your request.

SILK SCREEN CATALOG

Underwood Supply Co. has announced a new 86 page catalog of silk screen equipment, materials and supplies. All items are cross-indexed for convenient reference. For a copy, please mention PEE No. 439 L in your request.

PRODUCTION CONTROL SYSTEM

A new eight page booklet presents a case history of the use of Produc-Trol, a new visual control system, in the printing plant of Young and Selden Co., Baltimore, Md. With the use of Produc-Trol Boards every order every day is spotlighted. Called Case History No. 491, the booklet includes information on how the Produc-Trol system works. It is illustrated with photographs of the system in use, and provides list of printing and engraving companies who now use Produc-Trol. For a copy, please mention PEE No. 433L in your request.

LUBRICATED BEARINGS

Reliance Electric and Engineering Company's new bulletin entitled *New Automatic Grease Monkey* is descriptive of the Reliance Metermatic pre-lubricated bearing design. Used on the company's a.c. and d.c. motors, the bearing design features the new metering plate that automatically regulates grease flow to the bearing and provides pressure relief against over greasing. The bulletin is two color, four pages, and in it are contained illustrations and diagrams along with specifications. For a copy, please mention PEE No. 430L in your request.

HAND TRUCKS

Magline, Incorporated offers a new illustrated bulletin in which is provided complete information about the company's hand truck line. In addition to specifications and technical data on the product line, the four page, two color bulletin introduces a new hand truck selection plan, which tells the user how he can custom design a Magliner hand truck to meet his exact job requirements. The bulletin is also descriptive of optional accessory equipment. For a copy, please mention PEE No. 431L in your request.

ENCLOSED SWITCHES

A 28 page catalog, Number 83, covering a complete line of industrial enclosed switches has just been published by Micro Switch, Division of Minneapolis-Honeywell Regulator Co. Included are general purpose switches, sealed switches, heavy-duty limit switches, hand operated switches and maintained - contact switches, all of which are available in a variety of actuator designs, contact arrangements and electrical ratings. Catalog contains photographs, dimension drawings, circuit diagrams, electrical data and technical information. For a copy, please mention PEE No. 434L in your request.

Two Timken Appointments—The appointments of John Rundt to the post of chief engineer, Div. of Research and Development, Timken Roller Bearing Co., and Alva Kopatz as chief draftsman for the same division, were announced by A. L. Bergstrom, vice president in charge of engineering. Rundt joined the company in 1935 and worked successively in engineering capacities in the Fuel Injection Div. and Work Engineering Dept. Kopatz started with the company in 1940 in the Products Development Dept.

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BOOKS

Typographia

Many miniature books have been published from time to time by men associated with the Graphic Arts. The subject matter of the books may or may not pertain to printing. Among those who lately have published such books are Amadeo R. Tommasini, plant manager, University of California Press (Berkeley); C. Harold Lauck, Journalism Laboratory Press, Lexington, Va. and a number of others.

Printing Equipment Engineer recently received *Typographia*. This little book contains the last three articles written by the late E. M. Diamant, founder of Diamant Typographic Service, New York, N. Y. The articles are entitled *Old Types Never Fade Away, The New Trend —Wide Types,* and *The Graveyard of the Private Types. Typographia* was published as a tribute to E. M. Diamant by R. M. and W. H. Diamant. It is the eighth of the series of miniature books.

The book consists of 29 numbered pages not including the colophon. It measures 2⅞ in. wide by 4⅛ in. Bound in hard boards, red paper, with chapbook all-over design. Set in Linotype's 9 pt. Scotch Roman on 9 pt. body. A thousand copies were printed for distribution to friends in the Graphic Arts. Beautifully designed, set into type, printed and bound.

History of 3M

History of Minnesota Mining & Mfg. Co., maker of scotch tape, offset plates, glass beaded press blankets and the LP makeready system, has been recorded in readable style by Virginia Huck in *Brand of the Tartan*. This well-illustrated volume is 6½ in. by 9 in. and contains 260 pages. Written from an objective viewpoint, the book is nevertheless a glowing tribute to the drive and initiative of 3M personnel and all American business as well. If you like your adventure down-to-earth and true-to-life, this is a good one.

Mechanical Engineering Dictionary

Electronics notwithstanding, the bulk of the engineering know-how required in today's printing plant is mechanical engineering. That's why the seventh edition of Horner's *Dictionary of Mechanical Engineering Terms* is of importance to printing industry executives.

The 5 in. by 7½ in., hard bound, 417 page book contains two major sections of definitions: *Dictionary of Modern Terms Used in Mechanical Engineering* and *Dictionary of General and Traditional Terms Used in Mechanical Engineering.*

A slightly British slant to some of the definitions does not detract substantially from the wealth of practical and theoretical mechanical engineering information contained in the volume.

Operation of the Offset Press

A recently published technical book designed to be of practical assistance to the pressman is entitled *Operation of the Offset Press.* The author is Theodore F. Makarius. In the introduction the author comments upon the fundamentals upon which good offset presswork is dependent including color process work, condition of the press, length of run, condition of the paper, plate quality, ink, condition of the dampeners, plate grain and the like.

The book is written in as simple language as possible. There are 25 chapters and 57 pages of *Case Histories* for overcoming specific troubles. There are 19 illustrations, two of which are in color. Among the 25 chapters are those dealing with: *Setting the Pressure, Inking Rollers, Dampeners, Ink Fountains, Mounting Plate and Blanket, Split Fountain Printing, Drying Problems, Register Troubles* and others.

In a six page *Ink Problem Reference Chart* are listed 28 of the more common problems, how to identify each, and the possible cause and remedy.

In the chapter entitled *Inks For the Offset Press,* a color chart is included to demonstrate the difference in cleanliness of color when mixing two inks which complement each other. Also in this section is another color chart which is designed to show the result of mixing different percentages of Laketine with Lemon Yellow, Warm Red and Peacock Blue.

In the *Case Histories* addendum there are 66 instances where specific

The Basic Principle of Minimum Makeready

Letterpress will take a great step forward when printers generally accept the principle that the finest quality can be obtained by *merely levelling the impression* — providing plates are mounted on accurate, stable bases of sufficient compression strength.

In order to demonstrate this principle, we have simultaneously printed duplicate electros with and without mechanical overlays and from flat and treated duplicate plates. We will be glad to send you a set of these demonstration sheets.

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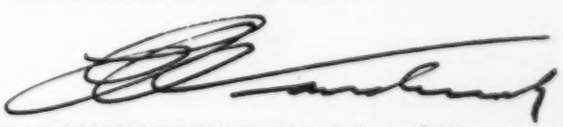

E. O. VANDERCOOK, *President & Research Director*
3601 W. Touhy Ave., Chicago 45, Ill.

problems were solved by given procedures. Included are such problems as blurred images, drying troubles, ghosting, greasing and scumming, gum streaks, hickeys, misregisters, mottled print, offsetting, plate wear and streaks.

This is a thoroughly practical book for the man who operates the offset press. It has been especially written for that purpose.

Operation of the Offset Press—By Theodore F. Makarius. Size 5¼ in. by 7 3/16 in., 254 pages, 19 illustrations. Bound in gold stamped semi-flexible pebbled imitation leather. Price of the book is $10.25 per copy postpaid. This volume may be ordered through the *Printing Equipment Engineer*, 1276 W. Third St., Cleveland 13, Ohio.

Conference Dates

(With Organization Name and Principal Officer)

American Photoengravers Assoc. — 1955 Conv., Waldorf-Astoria Hotel, New York, N. Y., Oct. 10-12. Exec. Secy. Frank J. Schreiber, 166 W. Van Buren St., Rm. 430-A, Chicago 4, Ill.

ANPA Mechanical Conf.—1956 Conf., Statler-Hilton Hotel, Dallas, Tex., June 4-6. Mgr., ANPA Mechanical Dept., Richard E. Lewis, 370 Lexington Ave., New York 17, N. Y.

Book Manufacturers' Institute—1955 Conf., The Greenbrier, White Sulphur Springs, W. Va., Oct. 13-15. Secy. Miss A. G. Watson, 25 W. 43rd St., New York 36, N. Y.

Fifth District Craftsmen's Conf. — 1956 Conf., Hotel Cleveland, Cleveland, O., June 1-2. Secy.-Treas. Dave Walker, Adm. Asst., Graphic Arts Assoc. of Michigan, 320 W. Lafayette St., Detroit 26.

Graphic Arts Trade Assoc. Executives—1955 Meeting, Chalfonte-Haddon Hall, Atlantic City, N. J., Oct. 13, 14. Secy.-Treas. Arthur L. Johnson, Graphic Arts Assoc. of Milwaukee, 704 W. Wisconsin Ave., Milwaukee 3, Wis.

Gravure Technical Assoc.—1956 Annual Meeting, Hotel Biltmore, New York, N. Y., Feb. 1-3. Secy. Len S. Pinover, Room 4800, 30 Rockefeller Plaza, New York 20, N. Y.

Great Lakes Newspaper Mechanical Conf.—1956 Conf., Schroeder Hotel, Milwaukee, Wis., Jan. 29, 30, 31. Secy.-Treas. Don Clark, Stereotype Supt., Grand Rapids. (Mich.) *Press.*

Illinois Newspaper Mechanical Conf.—Secy.-Treas. Arthur Kramer, Joliet (Ill.) *Herald-News.*

Intl. Assoc. Electrotypers & Stereotypers—1955 Conf., Shoreham Hotel, Washington, D.C., Oct. 19-22. Exec. Secy. A. P. Schloegel, 701 Leader Bldg., Cleveland 14.

Intl. Assoc. of Printing House Craftsmen—1956 Conv., Biltmore Hotel, Los Angeles, Aug. 12-15. Exec. Secy. Pearl E. Oldt, Rm. 806, Transportation Bldg., 307 E. Fourth St., Cincinnati 2, O.

Intl. Graphic Arts Education Assoc.—1956 Conf., Santa Barbara College, Univ. of California, Santa Barbara, Calif., Aug. 5-10. Exec. Secy. Samuel M. Burt, 719 Fifteenth St. N.W., Washington 5, D. C.

Intl. Printers Supply Salesmen's Guild—1956 Conv., Biltmore Hotel, Los Angeles, Aug. 12-15. Secy. Louis A. Croplis, American Type Founders, 555 Broadway, New York 12, N. Y.

Intl. Typographic Composition Assoc.—1956 Conf., Royal York Hotel, Toronto (Ont.) Can., Oct. 10-13. Exec. Secy. Frank M. Sherman, 1015 Chestnut St., Philadelphia 7.

Iowa Daily Newspaper Mechanical Conf.—Secy.-Treas. Paul F. Kamler, Mechanical Supt., Clinton (Ia.) *Herald.*

Kansas-Missouri Newspaper Mechanical Conf. — Kansas Secy.-Treas. Larry Miller, Kansas Press Assoc., 701 Jackson St., Topeka, Kans. Missouri Secy.-Treas. William A. Bray, Missouri Press Assoc., 220 Walter Williams Hall, Columbia, Mo.

Lithographers National Assoc., Inc.—1956 Conv., Drake Hotel, Chicago, Ill., May 10-12. Exec. Dir. W. Floyd Maxwell, 420 Lexington Ave., New York 17, N. Y.

Mid-Atlantic Newspaper Mechanical Conf.—1956 Conf., Lord Baltimore Hotel, Baltimore, Md., March 8-10. Conf. Dir. Theodore A. Serrill, PNPA

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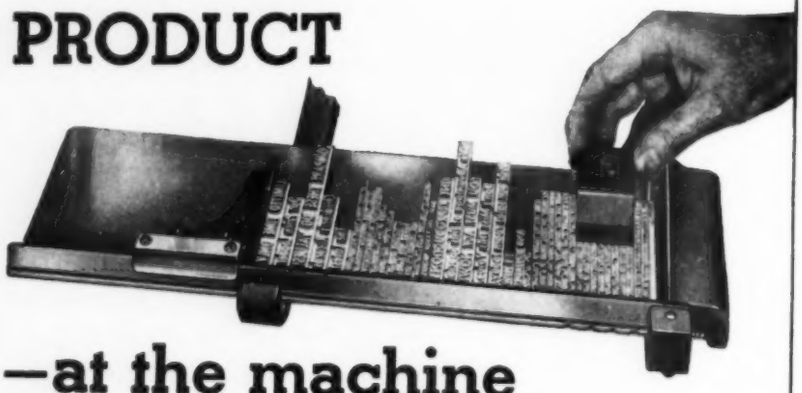

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National Assoc. of Litho Clubs—1956 Conv., Lord Baltimore Hotel, Baltimore, Md., April 20-21. Exec. Secy. Elton N. Baker, 833 N. Orleans St., Chicago 10, Ill.

National Assoc. of Photo-Lithographers—1955 Conf., Hotel Statler, Cleveland, O., Sept. 21-24. Walter S. Soderstrom, 317 W. 45th St., New York 36, N. Y.

National Printing Equipment Assoc., Inc.—1955 Conv. meets concurrently with Printing Industry of America, Hotel Chalfonte-Haddon Hall, Atlantic City, N. J. Secy. James E. Bennet, 140 Nassau St., New York 38, N. Y.

National Safety Council Printing and Publishing Section — 1955 Meeting, Conrad Hilton Hotel, Chicago, Oct. 17-19. Staff Rep. James D. Saul, National Safety Council, 425 N. Michigan Ave., Chicago 11.

New England Mechanical Conf.—1955 Conf., Hotel Statler, Boston, Mass., Oct. 15, 16. Secy.-Treas. Walter C. Crighton, Comp. Room Supt., New London (Conn.) *Day*.

New York State Capital District Mechanical Conf.—1956 Conf., Sheraton-Ten Eyck Hotel, Albany, N. Y., Jan. 28, 29. Dir. Floyd Laurenty, Schenectady (N. Y). *Union-Star*.

Northwest Mechanical Conf.—1956 Conf., Radisson Hotel, Minneapolis, Minn., Feb. 18-20. Secy.-Treas. Ralph N. Carson, Linecasting Instructor, Dunwoody Industrial Institute, 818 Wayzata Blvd., Minneapolis.

Pacific Mechanical Conf.—Secy. Edward Maggi, Phillips and Van Orden, 870 Brannan St., San Francisco 3.

Packaging Institute Assoc. — 1955 Forum. Hotel Statler, New York, N. Y., Nov. 1, 2. Exec. Dir. Laurence V. Burton, 342 Madison Ave., New York 17, N. Y.

Printing Industry of America—1955 Conf., Hotel Chalfonte-Haddon Hall, Atlantic City, N. J., Oct. 15-20. Gen. Mgr. James R. Brackett, 719 Fifteenth St., N. W., Washington 5, D. C.

Research and Engineering Council of the Graphic Arts Industry, Inc.—1956 Meeting, Edgewater Beach Hotel, Chicago, Ill., May 9-11. Managing Dir. Robert E. Rossell, 719 Fifteenth

Screen Process Printing Assoc., Intl. —Exec. Secy. Robert H. Blundred, 549 W. Randolph St., Chicago 6.

SNPA (Eastern Div.) Mechanical Conf.—1956 Conf., The Dinkler Plaza, Atlanta, Ga., Aug. 19-21. Secy. John A. Hogg, Southern Newspaper Publishers Assoc., P.O. Box 1569, Chattanooga 1, Tenn.

SNPA (Western Div.) Mechanical Conf. Secy. Walter Johnson, jr., P. O. Box 1569, Chattanooga 1, Tenn.

Southern Graphic Arts Assoc.—1956 Conv., Eola Hotel, Natchez, Miss. Secy. Charles E. Kennedy, 1514 South St., Nashville, Tenn.

Equipment Sales and Installations

Reports

R. Hoe & Co. Installation

To further speed deliveries, the *Wall Street Journal* is planning to introduce to its mechanical plant in New York, N. Y., four R. Hoe & Co., Inc., printing units with double-former, double-delivery folder, representing 80 T. of printing equipment. Installed with the presses will be reels, for feeding the newsprint, tension devices and pasters. The new presses will accommodate the printing of the increased circulation of the *Journal*. Installation of the Hoe presses, together with building changes necessary to house the new equipment, are planned for completion in 1955.

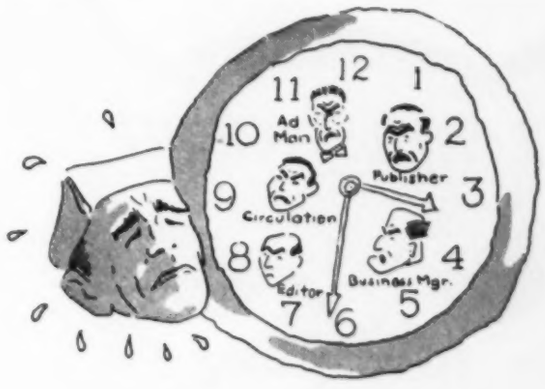
Wood Installations

Over the past weeks, Wood Newspaper Machinery Corp., Plainfield, N. J., have received orders for Standard Pony Autoplate Machines from the following newspaper plants: Athens (Ga.) *Banner-Herald*, Shelby (N. C.) *Star*, Salina (Kan.) *Journal* (to be equipped with vacuum equipment, Double-Page Mechanism, Pony Pump and Pneumatic Pumping Device), Monmouth (Ill.) *Review-Atlas*, Austin (Minn.) *Herald*, Garden Grove (Cal.) *News* (complete with auxiliary equipment), Rock Hill (S.C.) *Evening Herald*, and Columbia (S.C.) *State*.

As part of its expansion program, the Red Bank (N. J.) *Register* is erecting a new plant to house the pressroom, reelroom and stereotype department. New stereotype equipment includes a Wood Pony Autoplate Machine. Circulation of the *Register* now exceeds 13,000 daily and average 52 pages per issue.

Merganthaler Installation

The Midland (Tex.) *Reporter-Telegram* has become the first daily newspaper in West



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TINGUE
PRINTING PRESS
BLANKETS

FIBER FRICTION BUFFER

Arlie Shroyer, Machinist, Terre Haute (Ind.) *Tribune-Star*, tells us he is using fiber driving clutch facings (buffers) on the Linotypes in his plant. These have been substituted for the usual leather friction buffer (C-18). The fiber buffers were cut from 0.090 in. thick black plastic printing plates. They differ in no way from the usual type of facing except with respect to thickness and material.

Composing Room Supt. Harry Brentlinger states in addition to using the fiber friction buffer facings, a steel coil extension spring has been mounted on each side of the arm (C-1476). The other end of each spring is connected to a boss on each friction shoe (C-125). When the clutch is released as the machine comes to normal position the springs help retract the buffers from the inner rim of the driving pulley and prevent any chattering action due to lost motion in the part while the machine is standing in normal position.

It has not been necessary to strengthen C-4 clutch rod spring.

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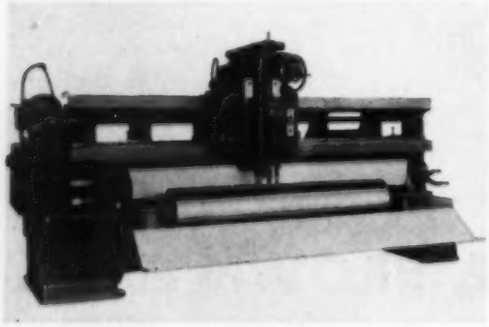
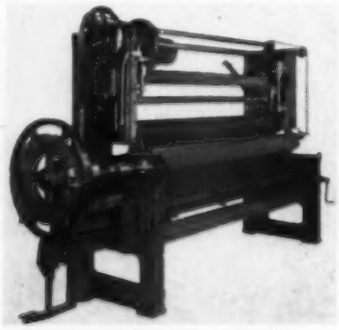


Grinding and Polishing Machine



Layon or Transfer Machine

STANDARD PROCESS CORPORATION

Manufacturing Gravure Equipment and Supplies

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Texas and one of the few in the state to adopt the larger nine-point body type, cast on ten-point slug. The change to the new face marked the end of a shop improvement program, which included installation of three new Linotypes and other production equipment.

The new face is nine-point Ionic and replaces the seven-point Ionic which was used on a nine-point slug. The *Reporter-Telegram* retained six-point Ionic on a six-point slug for classified advertising. New equipment installation included two Linotype Blue Streak Cometa, which replaced Model 14 and Model 8 Linotypes, and a Model 35 Rangemaster Linotype. The remainder of the all-Linotype shop includes two Model 30s, two Model 31s and another Blue Streak Comet.

Other new equipment installed at the same time included an Elrod Stripcaster and a Ludlow Supersurfacer.

Color Letterpress Increase

A study of the Montgomery Ward & Co. mail order catalogs for the last five years reveals a 30% increase in the use of four color letterpress printing. The new 1955 General Fall and Winter catalog contains 262 body pages of letterpress color which is an increase of 5% over the same 1954 catalog. These color pages comprise 25% of the 1054 page catalog and represent the largest amount of letterpress color used by any of the mail order houses. The balance of the catalog is printed in monotone or two color rotogravure. The 1955 catalog weighs just under 4½ lbs. and costs 23½c to mail. Some 5600 curved chromed nickel-faced electrotypes were used to print the color illustrations. Most of the four color illustrations were printed on heat set rotary presses, says John R. Ripley of Montgomery Ward catalog production department. The four color work is divided among several printers. As early as 1916 Montgomery Ward used 60 pages of four color letterpress printing in its general catalog.

Electrotypes

(Continued from Page 52)

for each cast. All operations are push-button controlled, insuring good productivity.

Pressure Casting. An automatic flat caster, utilizing a water-cooled platen and controlled hydraulic pressure to back up the copper shell with electrotype metal, made its appearance in 1950. This equipment, pioneered by a midwestern electrotyper, has speeded up production of flat casts. The water-cooled top platen takes the heat off quickly, cooling the metal uniformly from top to bottom.

Solidifying Shaver. Introduced in 1950, this machine solidifies the backing metal of electrotypes mechanically and shaves in one operation to tolerances of 0.0005 in. Hydraulic drive provides fast, controlled operation. The machine gives precision and quality to flat electrotypes with a minimum of hand-finishing.

Centrifugal Pressure Casting. This Meyers method (Fig. 5) of manufacturing curved electrotypes was introduced in 1950. It consists of equipment for applying the molten backing metal to the curved electrotype shell while the shell is revolving at high speed. According to printers, centrifugal casting produces accurately curved plates which cut down time in starting rotary press runs.

Solidifier-Leveler. The Bishop automatic electrotype plate consolidator and leveler (Fig. 6) was developed in 1951. Its purpose is to solidify evenly the entire backing metal of the electrotype and, at the same time, level the face of the plate for uniform printing. Cantilever action is employed through a series of staggered rollers. This action permits the individually pivoted knurled rollers to compress and solidify the backing metal with controlled pressure. It minimizes hand-finishing and produces hard, durable, flat precision printing plates.

Laminated-type Curved Plate. This plate represents the first basic change in the construction of the electrotype in over 100 years. Tests, begun in 1951 and continuing through 1954, have produced a laminated curved plate consisting of a thinner electrotype (less lead in the base). The electrotype is attached to an aluminum saddle with a layer of plastic which also forms the bond between the aluminum and lead. It is being used on high speed rotary presses, particularly in the magazine field. The light weight feature of the plate permits increased press speeds. It also combines strength with dimensional stability and precision register.

Cold Curving Die. This Bishop method of cold curving color plates (Fig. 7) was introduced in 1954. The die, made of Swedish spring steel, can be used on any type of cold plate curver. Three passes of the assembly (plate and die) through the curver generally are sufficient.

Improved methods of Makeready. Gradually, through the years, several makeready systems have been developed to alter the true plane of the printing surface to more nearly conform with the necessary printing pressure. One system mechanically lowers the highlights and raises the solids on a precision basis. This is done by using special laminated paper and special equipment for applying pressure. It results in a finished electrotype which conforms to the impression necessary for quality printing. Another system controls the accuracy of all materials used in the printing form. This system aims to eliminate the need for makeready in printing on flat-bed presses.

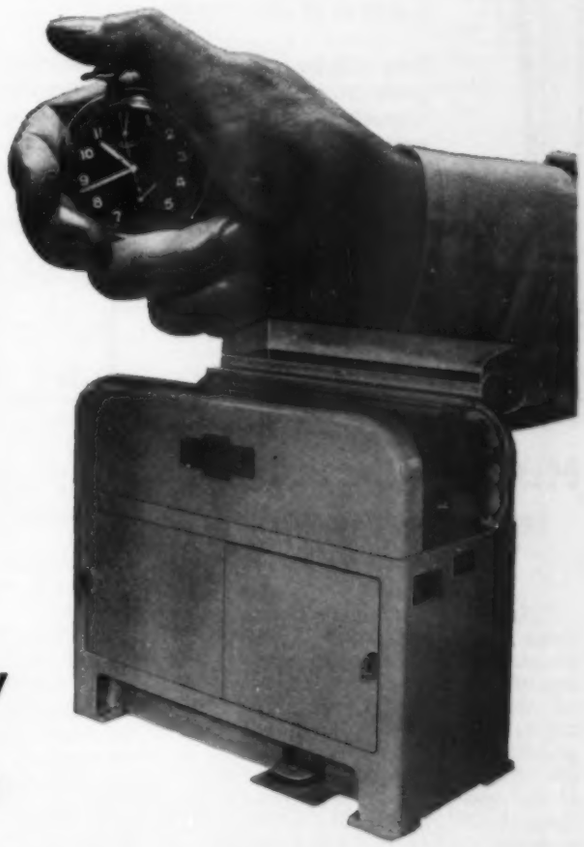
Pre-madeready Newspaper Plates For R.o.p. Color Printing. Laminated sheets or resin impregnated tissues, introduced in 1954, appear to be solving some of the register problems or r.o.p. color stereotype mat molding. Applied when the mold is made, these materials remain—as a cushion—permanently fixed to the mat. They keep printing surfaces flat during casting, retard shrinkage and, consequently, reduce pre-register and excessive makeready.

There are several other methods and machines now in the development stage. One installation is the Bishop automatic continuous immersion caster. It is a high production unit, equipped with 34 casting pans and a continuous transmission system. This machine automatically immerses casting pans and shells into molten metal, controls the thickness of backing metal, cools and delivers the casts on a conveyor belt to solidifying-leveling machines.

"Final evidence that the electrotyping industry is on the move," it is concluded in the association survey, "is our comprehensive educational program which was launched in April, 1955. Its basic aim is to acquaint present and potential users of printing with the advantages of letterpress methods in speed, precision and quality."

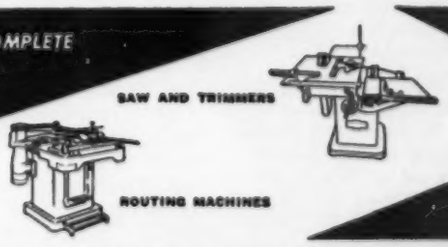
NEED PROOFS IN A HURRY?

...then you need the NEW WESEL EPP-4 PROOF PRESS



Wesel delivers quality proofs more quickly . . . more economically . . . with less maintenance. The EPP-4 features heavier construction and quieter operation. Equipped with mechanical safety guards and automatic stopping. Has improved platen inking.

WRITE FOR COMPLETE INFORMATION TODAY!



WESEL MANUFACTURING CO.

Dept. 101 1141 N. WASHINGTON AVE., SCRANTON 9, PA.

WHY STRUGGLE FOR A NEW **HIGH** IN MAT REPRODUCTION

when you can get the BEST in Stereotype Performance with

BEVERIDGE MATS

Beveridge's smooth face picks up the dots with ease. Clean release of the plate in casting and deep molding qualities are other noteworthy features of these mats.

You will be happy with the minimum makeovers, while your advertising department and advertisers will appreciate clean, sharp faithful reproductions. Let us send you an order —write today.

NEW PRODUCTS DIVISION

BEVERIDGE PAPER CO.

Indianapolis 4, Indiana

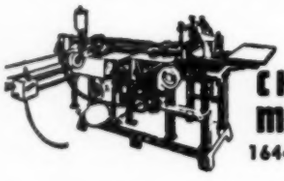
MASS MAIL

The CHESHIRE Way*

● Automatically attach addressed labels at operating speeds up to 18,000 per hour. Faster, more accurate than any other method, hand or machine. Opens mail room bottlenecks, maintains schedules, reduces subscription complaints.

100,000,000 mailings per month on Cheshire machines. Earlier models still operating after 24 years' constant use.

* An addition to, not a replacement of, your present addressing system. Apply roll strip or continuous pack form labels.



CHESHIRE MAILING MACHINES, INC.

1644 N. Honore St., Chicago 22, Ill.

Human Element In Operation of Powered Trucks

"Since the human element affects truck operation so closely, proper selection and efficient training of truck operators are the keys to obtaining maximum truck potential," says W. A. Meddick, vice president, Elwell-Parker Electric Co., Cleveland. "It doesn't matter if you use one or one thousand industrial trucks; driver training is a must. After all, one truck in a small plant can do just as much damage, and often more in proportion, than a fleet of trucks in a larger plant."

As an aid to both large and small companies in the maintenance of an effective driver safety program, Meddick cites the following twenty-eight points:

1. Drivers must stop within eight feet in open aisles or roadways; within three feet in narrow aisles, near machinery and in congested areas. A distance of at least ten feet must be maintained between moving vehicles. Extreme care must be exercised where floors are wet or greasy.

2. Trucks must be completely stopped and the horn sounded before: (a) entering doors of all buildings, (b) approaching blind corners, (c) turning into or crossing main aisles, (d) entering ramps.

3. Vehicles must be started and stopped without skidding the wheels.

4. Drivers must learn the capacity of their vehicles and lift no loads above that capacity.

5. Disabled trucks must be towed by another vehicle; they must not be pushed.

6. Don't allow loads to obstruct the operator's view. Normally, loads should be such that this does not happen. If in extreme cases such size loads are unavoidable, the truck should be moved backwards.

7. Loads should never be picked up with forks off center. If a load is set down temporarily, the same care in picking it up again should be exercised. By the same token, loads should be prepared so that the weight of a load unit itself is not appreciably off center. Loose loads should be carried in proper containers.

8. Personnel other than the driver himself should never operate or ride on an industrial truck. Unauthorized persons riding on forks or platforms, sitting on the battery or engine compartment, crowding the operator, or hanging onto the truck can only invite compensation claims. Also, except under extreme cases or when closely supervised, a fork or platform truck should never be used to hoist personnel to reach the top of piles or to reach otherwise inaccessible areas.

9. Travel areas for industrial trucks should be kept free of ruts, obstacles, grease, oil, and pits. Truck operators should look out for such unsafe operating conditions and report them immediately.

10. Loads should be carried as low as possible. Loads carried high obstruct the operator's view, hinder maneuverability and reduce truck stability.

11. Doorways, corners and other travelways should be outlined with bright colors or hash marks. Pipes, machinery and other obstructions should be outlined in contrasting colors so that drivers can spot them immediately. Also, trucks should be painted in bright colors so they may be seen by other personnel. If a driver is not sure he has sufficient clearance he should stop his truck and make sure—not guess.

12. At the first sign that a truck is not operating 100% efficiently the driver should report it to the maintenance department or to authorized personnel.

13. Drivers should avoid making sudden or jerky stops. Special care should be taken in stopping when

Make Ready for PROFIT *with a "Goldmine Baumfolder"*

- Are you ready to meet competition and get YOUR SHARE of the printed advertising already budgeted by firms large & small? 1955 can still be your biggest profit year if you're *modern* equipped to cut folding costs and improve production with a BAUMFOLDER profit-creator.

It will FOLD-PERFORATE-SCORE-TRIM-PASTE all in *one* operation and best of all you can apportion only a few pennies from the *dollars* it earns for you on a pay-for-itself plan of modest initial and small monthly outlay (a mere fraction of increased profit). You can't afford to work without it, for you are paying for yours now in lost profit.

14,000 Baumfolder shipments in the past ten years are one proven-profit reason why you are handicapping your business without the latest-fastest folding equipment. There are naturally many more and detailed reasons which we will be pleased to tell you about. Just write us your size requirements (14x20 to 30x46) and allow us to mail information telling HOW to increase your profit.

RUSSELL E. BAUM, INC.
615 CHESTNUT ST., PHILA. 6, PENNA.

Coming up with new ideas and methods are an everyday occurrence here at Graphic Arts.

Our many skilled craftsmen, backgrounded by our 30 years' experience, are constantly on the alert for new ways to serve you.

GRAPHIC ARTS CORPORATION of OHIO
110 OTTAWA ST. • TOLEDO 4, OHIO • CHerry 4-3781
DETROIT • CHICAGO • NEW YORK

ONLY

WETTER

ROTARIES

have SAS* appeal

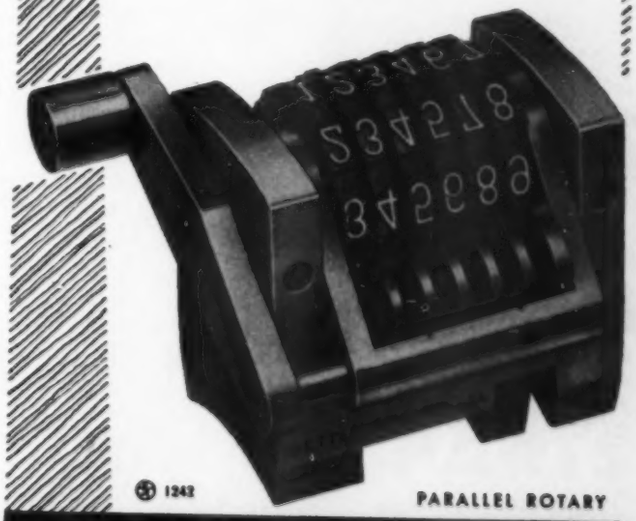
Specially designed for today's rotary presses, this sturdy cam-actuated machine prints numbers in a line parallel to axis of the impression cylinder.

SPEED
—in ability to keep pace with the fastest presses
—in set-up time with Quik-Lok Clamp

ACCURACY
—in number sequences
—in in-line printing

SHARPNESS
—in impressions

Wetter also manufactures other models for flat bed or cylinder presses to meet all numbering requirements of the printing trade. Write today for descriptive folder.



1242 PARALLEL ROTARY

WETTER NUMBERING MACHINE CO.
ATLANTIC AVENUE & LOGAN STREET · BROOKLYN 8, N.Y.
ONLY UNION MADE NUMBERING MACHINE IN U.S.A.

a load is elevated for tiering or stacking.

14. If the truck has a tilting device it should be used. By tilting the uprights toward the operator the weight of the load is brought back slightly and balance is improved.

15. Railroad tracks should always be crossed diagonally instead of at right angles.

16. The truck should be kept clean at all times. Dirt and rubbish make footing uncertain.

17. Traffic rules should always be observed. Operators should keep to the right and not travel in the wrong direction in one-way lanes. They should watch for low clearances.

18. Trucks should not be driven with wet or greasy hands. If necessary, a towel or wiping rag should be kept where it can be easily reached to dry hands before taking hold of the controls.

19. Operators should slow down before opening doors by remote control. They should be prepared to stop safely if it is found that the automatic mechanism is out of order or if the way is not clear beyond the door.

20. Fire prevention rules should always be observed. If the truck carries a fire extinguisher it should be in good condition and the driver trained in its use.

21. Swinging doors should be approached squarely and in the center to avoid breaking hinges.

22. The horn should be used, but not abused. The driver must signal when approaching intersecting aisles, blind corners, or swinging doors. Several short blast are better than one long blast. A driver should signal and slow down when approaching a pedestrian who is walking away from him. However, startling others with loud blasts of the horn should be avoided; the horn can be a hazard if used improperly. Sounding of the horn does not give the driver the right of way.

23. Trucks should be parked safely. They should not be left where they will block aisles, loading platforms, or doorways.

24. Operators should look before they start and be certain that personnel and objects do not obstruct the path of the truck, not only at leg level but also at head level. Particular care must be taken before backing out from a load.

25. Every collision should be reported to authorized personnel. Even if no damage is done, the causes of all collisions with other trucks, with persons, or with other objects, should be determined and corrected.

26. Crowds should be avoided. This should include congested areas during shift changes and lunch periods.

27. If more than one truck is operating in the same area the one following must stay at least 15 feet behind. Trucks should never travel two abreast.

28. Hoists should be handled carefully. They should not be raised or lowered when traveling. Hands should be kept off hoist tracks.

"WHO WORRIES?

Nobody...

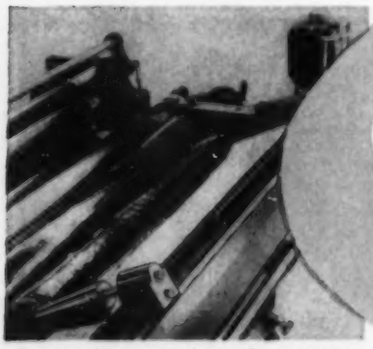
We bought Baldwin Agitators..."

"Yes, sir—take it from our customers, my boss and me, we're doing more, better quality work since we installed Baldwin Agitators."

"Neat, compact and engineered to each press, they work out of the way. That patented single rotating cone is easy and quick to clean, really mixes the ink and prevents any skin—force feeds the ink for a uniform flow that makes every sheet good. Powered with its own motor, it keeps working even when the press is shut down for lunch."

"I don't fill the fountain so often either, because the Baldwin doesn't waste ink. It's fine for short runs. I put less ink in the fountain—so we get started faster and spend less time cleaning up."

"One trial installation convinced us, and now we're 100% equipped—small presses and big ones alike. Yes, sir, my boss knew what he was doing when he ordered the Baldwins."



Let us show you how the Baldwin Ink Fountain Agitator can work for you, too. Write for details today, telling us press model, make and size.

WILLIAM GEGENHEIMER CO., INC.

80 ROEBLING ST. • BROOKLYN 11, N. Y.

MANUFACTURERS OF BALDWIN INK FOUNTAIN AGITATORS • BALDWIN VIBRATING ROLLERS
BALDWIN PRESS WASHERS • BALDWIN WATER STOPS • BALDWIN WATER FOUNTAIN LEVELS

65th Anniversary

The New York & Pennsylvania Co., widely known in the paper making industry, is celebrating its 65th anniversary this year. NYP was founded in 1890 when Col. Augustus G. Paine formed a merger between the Pennsylvania Pulp and Paper Co., with mills in Lock Haven and Johnsonburg, Pa., and the Champlain Fibre Co. at Willsboro, N. Y. In ten years' time the new company had almost tripled its annual output. Today the company can produce 85% of its own pulp requirements and 500 million lbs. of paper a year. In its 65th year, NYP is supplying paper for more than 27 million magazines a month.

During the celebration, members of the NYP organization will attend the National Paper Trade Assoc. convention that is being held in Chicago from Sept. 19 to 21. Also as part of its 65th anniversary, the company is preparing an anniversary brochure describing its history and growth in the paper making industry.

Behind

the 8 Ball on

Type Metal Problems

?

Then—you're just the man we want to see. Serving the graphic arts exclusively, we have helped thousands keep their type metal supplies at the correct working analysis through the Imperial Plus Plan. This same service can be yours—for the asking. Tell us when to see you.

IMPERIAL
TYPE METAL COMPANY
PHILADELPHIA 34 • NEW YORK 7 • CHICAGO 50

Imperial

SERVING THE GRAPHIC ARTS *Exclusively*

STAR MINIATURE LADLE

Here's a handy gadget that saves temper and time. Because of its pitch and size (1½" bowl, 12" threaded removable handle) it is ideal for scooping up the last bit of metal in the well that can't be reached with other ladles or home made devices. Extra long loop for easy storage or hanging — Price $2.95

"NO MORE METAL BUILD-UP SINCE WE STARTED USING SLIC"

says Chas. T. Shoemaker, Mech. Supt. Bergen Evening Record, Hackensack, N. J.

Mr. Shoemaker's reaction to "Slic" is typical of "Slic" users the country over.

LOOK AT THESE "SLIC" FEATURES

- Eliminates metal build-up in linecasting machines
- Low cost
- Harmless to metal and human skin
- High silicone content makes each application last longer
- 16 oz. size $4.35 — 6 oz. trial size $1.95.

LINOTYPE PARTS
Company, inc.
SOUTH HACKENSACK, N. J.

Precision TRADE ★ MARK Parts

BRANCH: 1327 BROADWAY, KANSAS CITY, MO. AGENCIES: CHICAGO
MINNEAPOLIS • LOS ANGELES • DENVER • BOSTON
CANADA: SEARS LTD. and Agents Overseas

FAVORED

ALL OVER THE WORLD

Nothing so influences the manufacture of Wood Dry Mats as the constant desire to give you the qualities that will help you do the best possible job.

WOOD FLONG CORPORATION
HOOSICK FALLS, N. Y.

WOOD DRY MATS
ALWAYS UNIFORM

New York City Office
551 FIFTH AVENUE, NEW YORK 17, N. Y.

To better serve the Publishing Industry—

We Are Expanding
and Have Changed Our Name:

MIDWEST
PUBLISHERS SUPPLY CO.
(Formerly Midwest Stereotype Supply Co.)
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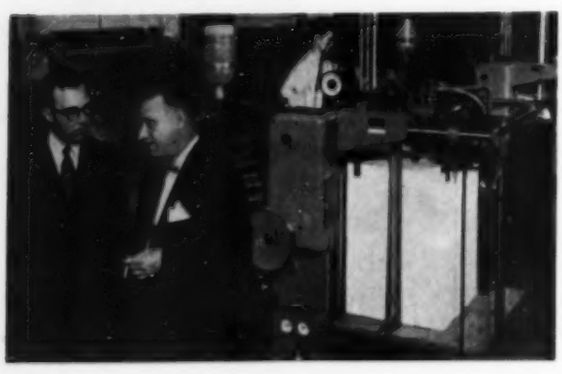
Tel. HAymarket 1-3846

STEREOTYPE • PRESSROOM
ENGRAVING • COMPOSING
Supplies and Equipment

Chem-Dry Process

At the Research and Engineering Council annual meeting in Boston last May, John D. Keane, Asst. Supervisor, Chemical Engineering Sec., Armour Research Foundation, Illinois Institute of Technology, reported upon the new Chem-Dry process. This is a revolutionary method for rapidly drying inks, paints and varnishes developed by the Armour Research Foundation in a special project conducted for the Meyercord Company of Chicago. The process is based on the discovery that printed films containing ordinary drying oils and resins can be hardened in about 1 sec. by passing through a chamber containing sulfur dichloride vapor. Several developments were made which bring the use of this process much nearer to realization in the Graphic Arts industries. First, two commercial pilot plants have been placed in operation on printing and coating steel and wood. These have demonstrated that the actual equipment necessary can be both compact and inexpensive. Secondly, it has been shown that the drying time required for hardening inks on non-absorptive surfaces such as coated papers, plastics, and painted surfaces is even shorter than had originally been visualized. Coatings which now require several hours before handling can be Chem-Dried in about 1 sec. without the use of powders or slipsheets. Work currently under way indicates that superior films can be produced without accompanying corrosion or paper damage. During the next year it is hoped to carry this development to a point where package Chem-Dry units can be installed on a routine basis in commercial printing and coating lines.



George H. Randall, owner, Randall Printing Co., (right), and John Davidson, Washington district manager, Miehle Printing Press & Mfg. Co., discuss the second Miehle 29 Offset press installation at Randall Printing. The firm installed its first Miehle 29 Offset in December, 1953. In addition to these two 29s, Randall has a new Miehle 38 Two-Color on order.

Scan-A-Sizer Field Test

The first of ten pilot models of the Fairchild Scan-A-Sizer, for field testing, was placed in operation this month in the plant of the Sun-Gazette newspapers in Williamsport, Pa. The Scan-A-Sizer is Fairchild Graphic Equipment Inc.'s electronic engraving machine with which original copy can be enlarged or reduced four and one-half times.

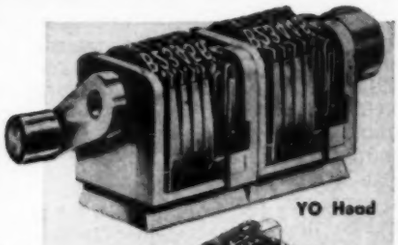
The Sun-Gazette papers both mat and print direct. They use direct printing from 85-screen Scan-A-Plate engravings made on an 85-screen Scan-A-Graver for society layouts and other photo displays when fine reproduction is desirable. When matting is more advantageous for r.o.p. photographs, the 65-screen Scan-A-Graver machine is used.

It was pointed out that the new Scan-A-Sizer, such as installed at Williamsport, with its selection of 65 and 85 screens, will solve this problem for many newspapers who wish to select the best meth-

Number for Profit

STRIP TICKETS

COUPON BOOKS

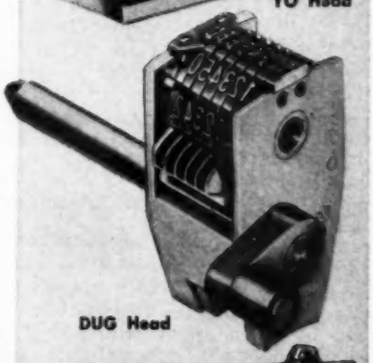


YO Head

FORCE Rotary Heads Center-Driven

Enjoy fast, profitable ticket and coupon numbering with equipment designed for the work. Let us send more information about Force Center-Driven Heads.

● Write for Force Rotary Head Operating & Maintenance Manual



DUG Head

WM. A. FORCE
& COMPANY INCORPORATED
216 NICHOLS AVENUE, BROOKLYN 8, N. Y.

Extras are Standard with Jampol methods and equipment

Watch a Jampol mailroom handling system at work—with attention to the "teamworking" of the various units. You'll see why it handles any bundle load, moves more newspapers, meets every need—faster and at lower cost.

Take advantage of the efficiency, simplicity and economy Jampol methods and equipment can bring to your plant. We'll be happy to discuss your specific requirements.

THE
JAMPOL COMPANY, INC.
General Offices and Factory
728-742 61st St., Brooklyn 20, N. Y.

od of reproduction to solve a particular make-up or composing room problem.

The Scan-A-Sizer employs a new design in the scanning concept. Copy is placed on a flat drawer-like projection and it is scanned by an optical system housed in the head near the top of the left hand end of the machine. The copy table is built to accommodate originals up to 18 in. by 22½ in., which may be mounted on material up to ½ in. thick. The scanning is done directly from side to side, as the copy table recedes into the machine.

The machine is similar to the Scan-A-Graver in that the light reflection from the highlight and shadow portions of the original copy is translated by a photoelectric cell and a subsequent amplification system into electrical energy so that a vibrating motor can activate the stylus in cutting craters in the plastic plate.

Controls for enlarging and reducing are located on a front panel. Adjustments provide for continuous enlargement up to four and one-half times or for continuous reduction downward by four and one-half times. This degree of enlargement makes it possible for a 35mm contact print to be enlarged to approx. 4½ in. by 6¾ in. or a 3 in. by 4 in. print, such as the Polaroid print-in-a-minute, to be enlarged to 12 in. by 16 in. An 8 in. by 10 in. glossy print can be reduced to a one-column cut by the Scan-A-Sizer.

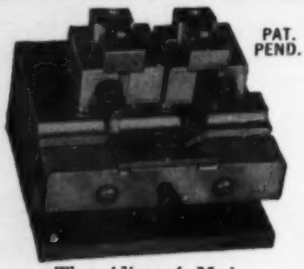
The Scan-A-Sizer is provided with interchangeable cylinders. One is the standard 8 in. by 10 in. cylinder, the maximum size of standard Scan-A-Graver engravings. On the other cylinder, an engraving of a maximum of 13⅛ in. by 16½ in. may be produced.

Newly designed, also, is the tonal response control adjustment of the machine. All Scan-A-Gravers have an adjustment for cutting action of the machine so that the proper highlight dot size and shadow dot size is obtained. In the Scan-A-Sizer is provided a new operator control to permit a variation in response to tonal changes in the highlight range of original photographs.

First Four-Color Ad

With the addition of two extra press units, the Elyria (O.) *Chronicle-Telegram* is now offering four-color work to its advertisers. Otto Schoepfle, publisher, and C. Russell Stokley, business manager, say the $50 thousand cost of adding and installing the press units is a sound investment in view of the increase in newspaper color work. The *Chronicle-Telegram* now has a press capacity of 40 pages straight or 80 pages collect. The newspaper can run 48 pages with two four-color ads. The accompanying miniature reproduction shows the first four-color page produced by the *Chronicle-Telegram*.

LINECASTING MATS NOW COST A QUARTER OF A DOLLAR EACH



The *Align-A-Mat*

This simple device will double and treble the life of your working fonts. Will restore to factory standard hundreds of mats ready to be discarded. Will eliminate distributor stops due to lugs worn short.

EVERY MAT SAVED IS 25¢ SAVED

Now in use in hundreds of leading plants here, in Canada and abroad.

Please write for literature.

FISK, 130 W. 46th St., N.Y. 36, N.Y.

Pass It Along

Many printing plant executives pass along copies of *Printing Equipment Engineer* regularly to interested employees in the plant. In this way, a more interested production organization will be maintained.

Want Solid Smooth Faced Plates . . . Every Time?

Automatic Metal Pump

Particulars furnished on request

No doubt about it, you can improve your cast results if you install an Automatic Metal Pump. Let us give you complete details.

INTERNATIONAL NEWSPAPER SUPPLY CORPORATION

134 N. LaSalle St. Chicago 2, Illinois

Display Process

(Continued from Page 47)

that seasonal variation of employment in the printing and publishing industry is relatively insignificant."

After analyzing the pro and con arguments relative to the guaranteed annual wage, Flynn concluded: 'You have your best defense to guaranteed wage plans in your own plants, in the industry. You already have what the Steelworkers, UAW, and other unions are attempting to accomplish in other industries through GAW; namely, full and stable employment. Your answer to the guaranteed wage should be a continued and accelerated interest in good management, particularly in production stabilizing techniques. It is your responsibility to assure, to the best of your ability, continued full-time employment for your employees.

Maintenance Clinic

(Continued from Page 45)

Vise Jaw Adjustments

In typographic composition plants, it is desirable to maintain vise jaw adjustments with a gauge so that when correction lines in tabular or columnized matter come into the plant at a later date alignment of end characters will be alike. The vise jaw adjustments can be maintained by constructing a bar gauge with a vertical rule matrix on each end. Slugs are cast in the regular manner from the one gauge on all machines. The vertical end rules permit exact alignment with previous composition.

Casting Better Slug Face

There was considerable discussion regarding improved casting of type characters on slugs. Some opinions were expressed that the printing quality of the type face has not been improved since the casting mechanism fundamentally is the same as it always has been. The opinion prevailed that each machine requires special treatment to get maximum results. That is, the remedial measures applied successfully to one machine will not necessarily improve face quality on another machine. There is no way in which all of the air can be expelled from the mold when a slug is cast. However, all crucibles should be packed competently. The plunger should be well fitted. The jets and vent slots in the mouthpiece should be clear at all times. With 4-12-84 metal, the pot temperature should be maintained at 535 deg. to 540 deg. F. temp, as closely as possible. Someone in the group asked: "Have you ever noticed that a much better type face is secured on a 42 pica machine?" The reason given is that the 42 pica machines are equipped with two pot pump plungers. The wish was expressed that perhaps it would be feasible to apply a two-plunger crucible to 30 pica machines.

Better Type Metal?

Someone asked what the type metal companies are doing to provide a better metal. The answer is that type metal companies have spent a great deal of money in trying to develop an improved formula but up to the moment the present standardized formulas are regarded as best for the purpose.

Maintaining Accurate Slug Trim

Moderator Cantor made a plea for precision in caring for composing machinery and producing as excellent a product as possible. He related that, when a machinist apprentice starts work in The Composing Room, he presents him with a Starrett micrometer and indoctrinates him with the necessity for obtaining accurate slugs from the machines. He said: "In our business 0.001 in. is an important matter." Adjustment of trimming knives should be watched constantly. The only way to maintain accurate slug trim is to measure the slugs at frequent enough intervals according to operation of the plant, and also taking into consideration whether or not the plant is operated two or more shifts per day.

A question was asked regarding

FOR THE BEST

BUY A.P.S.

EQUIPMENT & SUPPLIES

Composing Room
Stereotype Dept. • Pressroom
Photo Engraving • Art Dept.

PONY AUTOPLATE STEEL POURING SHEET

write for Full details

USED MACHINERY FOR SALE

Semi Cylindrical scorch
Tubular Scorcher
Hammond 5-Col Casting Box
Sta Hi Vacuum Scorcher
1,200 lb metal pot
Goss casting box, 5 Col.
Duplex Mat Roller

AMERICAN PUBLISHERS SUPPLY, INC.

P. O. Box 421 Lynnfield, Mass.

the rebuilding of Elrod rule molds. One answer was that in view of the carbon or oxidation deposits in the mold it would be better to discard the old mold and install a new one. The cost of the new mold is not great.

A discussion occurred regarding the depth of drive in line-casting machine matrices. It is 0.043 in. which is held to 0.0001 in. plus or minus variation. "Any greater variation is objectionable," said a voice in the group.

Adjusting Assembler Measure

Granted that the vise jaws are correctly adjusted, a slug can be trimmed to 15 picas, or a steel gauge can be made for that width when there are a number of assembler measures to be adjusted. Insert the gauge between the assembler slide left-hand finger and adjust the slide setting screw until a spoke of the star wheel just turns slowly or not at all against the end of the gauge when the spoke is in horizontal position.

ITCA Methods

(Continued from Page 46)

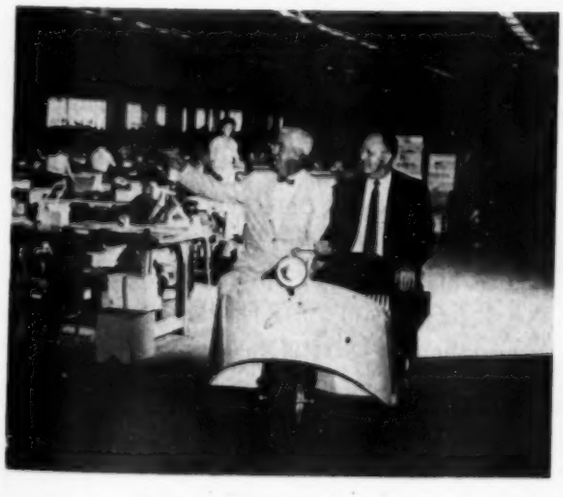
is difficult to find a younger man who has had some experience in photography and typography. It was agreed that it would be a mistake to engage a wet plate or portrait photographer for phototypographic work. Some of the technical schools, it was suggested, furnish suitable younger men who could be trained. If possible, it was again stressed, the man should have an appreciation for typography.

Progress in Phototypography

W. E. Trevett, of Beatty & Cooper, Toronto (Ont.) Can., spoke on *Progress in Phototypography*. He said he was speaking for those typographic composition plant managements who are trying to make up their minds whether or not to install phototypesetting equipment. Highlight of Trevett's address was: "Most operators of phototypesetting divisions within conventional metal plants point with pride to greatly accelerated sales dollar figures. While it is true that initial costs are higher than can be justified by normal standards, yet the profit returns on certain classes of work are far above those possible or permissible by conventional methods."

Sherman Reports on Availability of Equipment

Frank M. Sherman, Executive Director, ITCA, presented a report regarding status of a number of existing and proposed phototypesetting developments. Reported briefly in this article are the following: Mergenthaler Linotype Co. still is not prepared to make announcement about availability of its Linofilm phototypesetting machine but definitely expects to keep its promise that it will be on the market in 1956. The phototypesetting equipment sponsored by American Typefounders is in a dormant state. There is no indication of actual production regarding the Westover (English) equipment. Photon, Inc. has about 115 firms on priority list who want approx. 200 Photon equipments. Four are reported to be in actual operation. The company is still redesigning the machine, Sherman reported. A lot of 25 machines is being constructed with another lot of 25 announced for the first of the year. No late information is available on the Monophoto machine equipment announced some time ago by Lanston Monotype Corp. There are now about 160 Fotosetter machines in operation in plants throughout the country.



"Wheels" On Wheels—Latest acquisition of the Rust Craft Greeting Card Co. is this plant-travel motor Cushman scooter used by executives to negotiate the huge nine-acre, one-story layout of the firm's new plant at Dedham, Mass. As Pres. E. Wrightson Christopher handles the controls, right, chairman of the board, and co-founder of the company, Donald E. Rust points to their next objective in the Rust Craft inspection room. Pastel green vehicle has vinyl striped seat, equipment storage space in rear and has maximum speed of 15 m.p.h. Scooter also is used for outside inspection.

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Two plants are using five machines each. Latest installation is at the Washington (D.C.) *Post*. This machine is equipped with automatic quadding and centering device. Concerning Ludlow's Bright type equipment, there are two pilot machines in operation. No information has been obtained regarding availability. Modi-Graphic, Incorporated now has about 60 reproportioning cameras in use in plants. Company also reports there are more than 50 Duall Foto Lettering equipments in use. (The Duall system is for hand composed photographic display lines.) Filmotype and Typro report further progress in furnishing new type styles. (These are hand composed display lines exposed directly to paper or film one letter negative at a time.)

Equipment & Supplies

(Continued from Page 80)

xerography, The Haloid Company has announced. A 10 in. by 15 in. translucent film, called a XeroX Trans-Positive Sheet is used, onto which any type of original document may be copied by xerography.

To make the image permanent, Haloid is introducing a XeroX Vapor Fuser as a standard accessory. The sheet, in effect a positive film, is

then transposed on a positive working, pre-sensitized metal plate, and both are exposed to an ultra-violet light. Several XeroX Trans-Positive Sheets may be stripped with Scotch tape onto an acetate backing sheet, for making large positive working plates for multiple page forms.

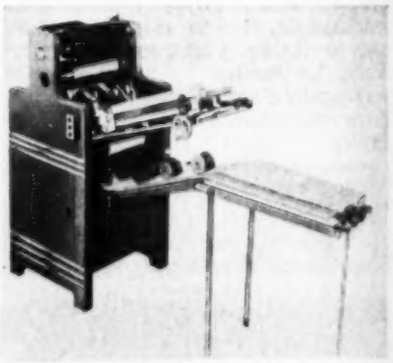
The light acts upon the sensitized coating in all areas of the plate except those shielded by the opaqueness of the image in the XeroX Trans-Positive Sheet. After exposure, the metal plate is developed and finished with fluids. It is then ready for the offset duplicator. The entire operation takes about 10 min., states sponsor.

Standard XeroX copying equipment is used in the xerographic phase. Xerography is a fast, dry, electrostatic way of copying. It will also make up to eight single copies, including a master or intermediate, from a single xerographic image. Reduction and enlargement of original copy may be accomplished with the system.

For further details, please mention PEE No. 582 in your request.

Envelope Imprinting Press

Hobson Miller Machinery, Inc., recently introduced an imprinting press designed primarily for imprinting envelopes from rubber plates. The press is compact, measuring 2 ft. wide by



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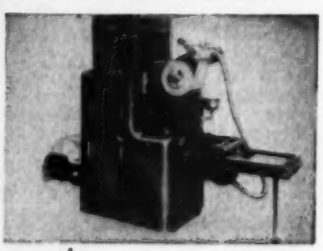

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7 ft. long. Both the feed and delivery are on the same side of the press. The plate cylinder is exposed. With Hobson Rotary Imprinter, envelopes are handled from 3 in. by 5½ in. to 6½ in. by 12 in. For further details, please mention PEE No. 569 in your request.

Keylining Process

General Plate Makers Equipment Co. has announced development of a photographic process for accurate register keylining, known as Zillaline

ZILLALINE PROCESS.
Above are prints made from one negative.

Miniature showing of prints made from one negative by the Zillaline process.

Keylining and Spread-Lettering. A special paper is the basis for the process. Any keylining or spread-lettering job it is stated, can be completed in less than 15 min. with colors in register without objectionable overlapping or white line between colors. Inside or outside thickness of keylines can be controlled from a sharp hairline up to 1/6 in. width. From a single negative can be produced a normal print or a reverse print on paper, a print in spread-lettering on paper and a keyline on paper, suitable for producing color labels. The process permits a four color job to be made from one negative since the paper subsequently can be contacted onto film or dry plates. For further information please mention PEE No. 575 in your request.

Ektagraph Film Activator

Eastman Kodak Co. announces its new Ektagraph Activator eliminates one of the previously used stop baths in processing Ektagraph film. This film is used in the preparation of stencils for screen process printing. All that is now required is the new activator and one stop bath, says Kodak. The activator is available in quantities to make one gallon. For further details, please mention PEE No. 585 in your request.

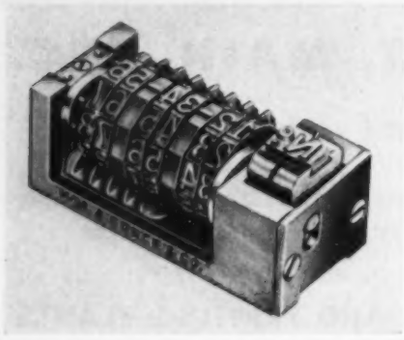
Thomas Collator Line

The 32 sheet tandem floor model collator for assembling duplicated sheets into sets is part of a new line of mechanical collators announced by George W. Oliver, president of Thomas Collators, Inc. The mechanical and electric powered collators feature speed load control and rotating feed-fingers. The load control allows operator to raise all feed fingers in unison so that both hands can be used for loading bins. The stroke-stop regulator permits operator to automatically adjust all feed fingers in one operation so that any size paper up to 20 in. by 17 in. will be ejected. Divided into mechanical single pedal and double pedal types and electric powered foot button types, the line ranges from eight sheet to 32 sheet floor models. Sev-

eral models are said to process in excess of 10,000 sheets per hr. Replacing single feed finger is the rotating feed finger. Component has been devised to occupy a minimum of height within each bin. For further information, please mention PEE No. 571 in your request.

Flat Bed Numbering Machine

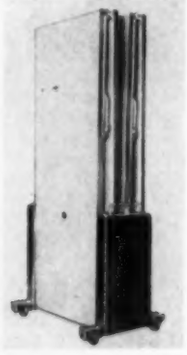
William A. Force & Co., Inc., has announced a model of its Ultra-Force End Plunger Typographical Numbering Machine, designed especially for terminal digit indexing of printed



forms for use on flat bed presses. Terminal digit indexing system is convenient for filing insurance forms, etc. Groups of two, in a series of six numbers, each stand for a division of the filing system. Gaps in the numbering sequence do not affect the system, which will hold a million folders. The machines are assembled to order. For further details, please mention PEE No. 583 in your request.

Folding Bindery Tables

The Mobil-Fold unit, consisting of two tables which can be folded into upright position, has been manufactured by Schieber Sales Co. for use in the bindery. Length of table is 12



A two unit folding table for use in the bindery.

ft. to 14 ft.; height is 20 in. to 30 in.; width is 28 in. When folded into heavy castered carrier, the table height is 6 ft. 2 in. to 7 ft. 2 in., according to length of table. Floor space required by carrier is 26 in. by 34½ in. Table tops are of Formica, pressure laminated on Philippine mahogany plywood with warp proof plastic undersurface. Stainless steel trim is flush with or below table top. For further details, please mention PEE No. 572 in your request.

Cut-Locator Method

Aiding the makeup of newspaper page forms so as to take advantage of the positions of screened cuts to avoid strikethrough and offset is the

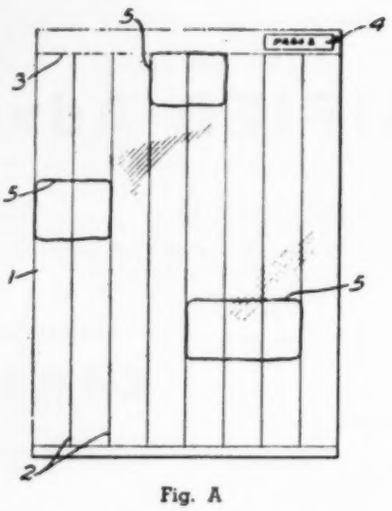


Fig. A

purpose of Alico, Incorporated's Cut-Locator method.

The Cut-Locator is a rectangular sheet of flexible plastic material as shown in Figs. *A* and *B*. The width of the plastic sheet should be equal to the width of the form. Vertical lines (No. 2 in the drawings) indicate the column lines of the form. The head rule of the page is marked also (No. 3 in the drawings). The form page number is indicated at the top of the sheet (No. 4 in the drawings). Page numbers 1 and 2 in a newspaper form would back each other up on either side of a single plastic sheet, for example.

For the purpose of explanation, we will describe the use of only one plastic sheet. The method consists of marking in crayon the outlines of all screened cuts placed into a newspaper page form (No. 5 in the drawings). Let's say this was done on page 2 of a newspaper form. When the backing page, or page 1, is to be made up, the transparent plastic sheet is turned over (as in Fig. B) and the page is made up with exact knowledge of where all cuts in page 1 are located.

When the second form has been sent to the stereotype department, the plastic sheet can be cleaned and placed in a suitable place for use in preparing the next edition. For further details, please mention PEE No. 579 in your request.

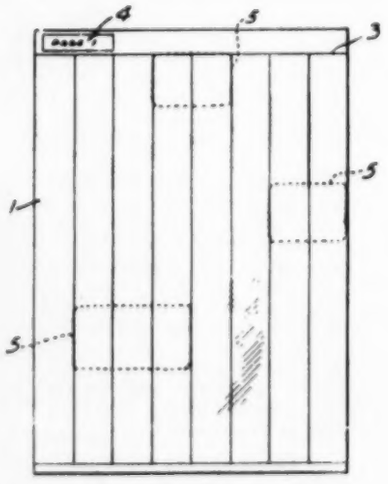


Fig. B

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OCTOBER 1955

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